|  |               | DEPARTMENT                                 | ATE OF UTAH<br>OF NATURAL RE<br>FOIL, GAS AND |  |  |  | FORI                     |              |  |
|--|---------------|--|---|--|--|--|--------------------------|--------------|--|
| APPLI  | CATION FOR    | R PERMIT TO DRILL                          | -   |  |  | 1. WELL NAME and                         | NUMBER<br>NBU 921-25K4BS |              |  |
| 2. TYPE OF WORK  DRILL NEW WELL (                                  | REENTER P     | &A WELL DEEPE                              | EN WELL                                       |  |  | 3. FIELD OR WILD                         | CAT<br>NATURAL BUTTES    |              |  |
| 4. TYPE OF WELL  Gas Well Coalbed Methane Well: NO                 |               |  |   |  | 5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES |  |                          |              |  |
| 6. NAME OF OPERATOR  KERR-MCGEE OIL & GAS ONSHORE, L.P.            |               |  |   |  | 7. OPERATOR PHO  | <b>NE</b> 720 929-6007                   |                          |              |  |
| 8. ADDRESS OF OPERATOR   |               | Denver, CO, 80217                          |   |  |  | 9. OPERATOR E-MA                         |                          | larko.com    |  |
| 10. MINERAL LEASE NUMBER   | . Box 1757757 | 11. MINERAL OWNE                           |   |  |  | 12. SURFACE OWN                          |                          |              |  |
| (FEDERAL, INDIAN, OR STATE) UO 1194 ST                             |               | FEDERAL IND                                | DIAN STATE                                    | <u> </u>   | FEE 🔵  |  | DIAN 📄 STATE (           | ~ ~          |  |
| 13. NAME OF SURFACE OWNER (if box 12                               | = 'fee')      |  |   |  |  | 14. SURFACE OWN                          | ER PHONE (if box 1       | .2 = 'fee')  |  |
| 15. ADDRESS OF SURFACE OWNER (if box                               | 12 = 'fee')   |  |   |  |  | 16. SURFACE OWN                          | ER E-MAIL (if box 1      | L2 = 'fee')  |  |
| 17. INDIAN ALLOTTEE OR TRIBE NAME                                  |               | 18. INTEND TO COM                          |   | TION   | FROM   | 19. SLANT                                |                          |              |  |
| (if box 12 = 'INDIAN')   |               |  | Commingling Applica                           | tion)  | №  | VERTICAL DIF                             | RECTIONAL 📵 HO           | ORIZONTAL 🔲  |  |
| 20. LOCATION OF WELL   | F             | OOTAGES                                    | QTR-QTR                                       |  | SECTION  | TOWNSHIP                                 | RANGE                    | MERIDIAN     |  |
| LOCATION AT SURFACE  | 1838 F        | FSL 1400 FWL                               | NESW  |  | 25   | 9.0 S                                    | 21.0 E                   | S            |  |
| Top of Uppermost Producing Zone                                    | 1848 F        | FSL 2161 FWL                               | NESW  |  | 25   | 9.0 S                                    | 21.0 E                   | S            |  |
| At Total Depth   | 1848 F        | FSL 2161 FWL                               | NESW  |  | 25   | 9.0 S                                    | 21.0 E                   | S            |  |
| 21. COUNTY UINTAH  |               | 22. DISTANCE TO N                          | EAREST LEASE LI                               | NE (Fe   | eet)   | 23. NUMBER OF AC                         | RES IN DRILLING          | UNIT         |  |
|  |               | 25. DISTANCE TO N<br>(Applied For Drilling |   | SAME   | POOL   | 26. PROPOSED DEPTH<br>MD: 9739 TVD: 9632 |                          |              |  |
| 27. ELEVATION - GROUND LEVEL 4980                                  |               | 28. BOND NUMBER                            | 22013542                                      | 29. SOURCE OF DRILLING WATER /<br>WATER RIGHTS APPROVAL NUMBER IF APPLICABLE |  |  |                          | F APPLICABLE |  |
| 4500   |               |  | 22013342                                      |  |  |  | 15 0 150                 |              |  |
|  |               | A <sup>-</sup>                             | TTACHMENTS                                    |  |  |  |                          |              |  |
| VERIFY THE FOLLOWING   | ARE ATTAC     | HED IN ACCORDAN                            | CE WITH THE U                                 | ТАН  | OIL AND (  | GAS CONSERVATI                           | ON GENERAL RU            | JLES         |  |
| WELL PLAT OR MAP PREPARED BY                                       | LICENSED SU   | RVEYOR OR ENGINEE                          | R COI   | MPLET  | E DRILLING   | i PLAN                                   |                          |              |  |
| AFFIDAVIT OF STATUS OF SURFACE                                     | OWNER AGR     | EEMENT (IF FEE SURF                        | FACE) FOR                                     | M 5. I   | F OPERATO  | R IS OTHER THAN T                        | HE LEASE OWNER           |              |  |
| DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED) |               |  |   | OGRA   | PHICAL MAI   | P  |                          |              |  |
| NAME Danielle Piernot  | -             | TITLE Regulatory Analys                    | st  |  | PHONE 72   | 20 929-6156                              |                          |              |  |
| SIGNATURE  |               | <b>DATE</b> 08/13/2010                     |   |  | <b>EMAIL</b> gn  | bregulatory@anadark                      | o.com                    |              |  |
| <b>API NUMBER ASSIGNED</b> 43047512570000                          |               | APPROVAL                                   |   |  | Bro  | 00 gill                                  |                          |              |  |
|  | 1             |  |   |  | Perr   | nit Manager                              |                          |              |  |

API Well No: 43047512570000 Received: 8/13/2010

|        | Propo               | osed Hole, Casing, ar | nd Cement |             |   |   |
|--------|---------------------|-----------------------|-----------|-------------|---|---|
| String | Hole Size           | <b>Casing Size</b>    | Top (MD)  | Bottom (MD) |   |   |
| Prod   | 7.875               | 4.5                   | 0         | 9739        |   |   |
| Pipe   | Grade               | Length                | Weight    |             |   |   |
|        | Grade I-80 Buttress | 9739                  | 11.6      |             |   | Γ |
|        |                     |                       |           |             | Γ | Г |

API Well No: 43047512570000 Received: 8/13/2010

|        | Proj            | oosed Hole, Casing, a | and Cement |             |   |   |
|--------|-----------------|-----------------------|------------|-------------|---|---|
| String | Hole Size       | Casing Size           | Top (MD)   | Bottom (MD) |   |   |
| Surf   | 11              | 8.625                 | 0          | 2380        |   |   |
| Pipe   | Grade           | Length                | Weight     |             |   |   |
|        | Grade I-80 LT&C | 2380                  | 28.0       |             |   | Γ |
|        |                 |                       |            |             | Τ | Г |

# **NBU 921-25K4BS**

Pad: NBU 921-25K

Surface: 1,838' FSL 1,400' FWL (NE/4SW/4) BHL: 1,848' FSL 2,161' FWL (NE/4SW/4) Section 25 T9S R21E

> Uintah County, Utah Mineral Lease: UO 1194 ST

# **ONSHORE ORDER NO. 1**

# DRILLING PROGRAM

# 1. – 2. <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

| <u>Formation</u> | <u>Depth</u> | Resource |
|------------------|--------------|----------|
| Uinta            | 0 – Surface  |          |
| Green River      | 1,451'       |          |
| Birds Nest       | 1,751'       | Water    |
| Mahogany         | 2,128'       | Water    |
| Wasatch          | 4,711'       | Gas      |
| Mesaverde        | 7,407'       | Gas      |
| MVU2             | 8,302'       | Gas      |
| MVL1             | 8,864'       | Gas      |
| TVD              | 9,632'       |          |
| TD               | 9.739'       |          |

## 3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program.

# 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

# 5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

# **Evaluation Program:**

Please refer to the attached Drilling Program.

# 7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 9,632' TVD, approximately equals 5,901 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,782 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

## 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

# 9. <u>Variances:</u>

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

## **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

## Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

# Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### **Conclusion**

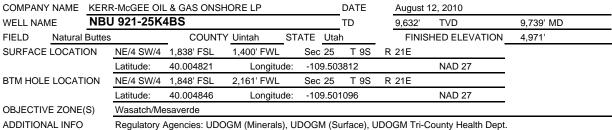
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

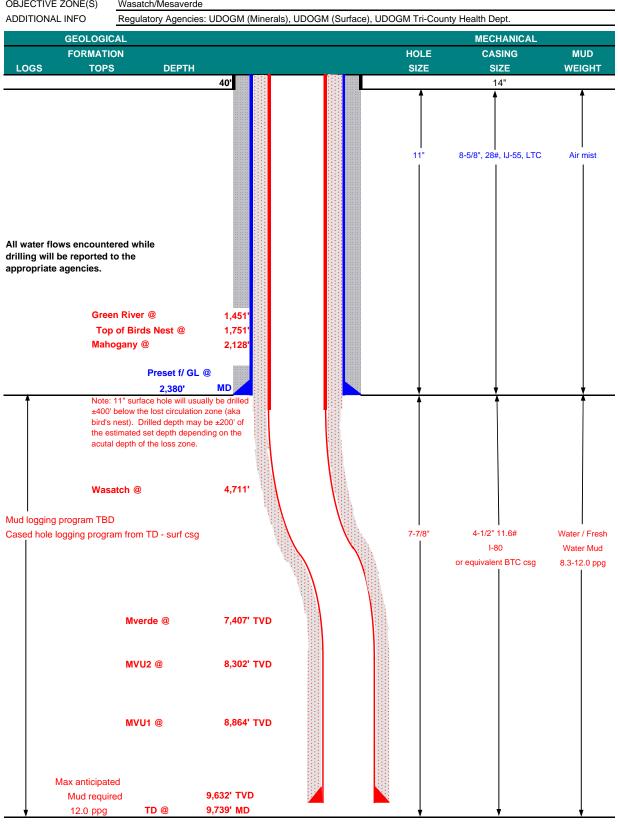
# 10. Other Information:

Please refer to the attached Drilling Program.



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM







### KERR-McGEE OIL & GAS ONSHORE LP

#### **DRILLING PROGRAM**

#### **CASING PROGRAM**

|            |        |      |       |       |       |       |       |       | DESIGN FACT | ORS     |
|------------|--------|------|-------|-------|-------|-------|-------|-------|-------------|---------|
|            | SIZE   | INTI | ERVAL |       | WT.   | GR.   | CPLG. | BURST | COLLAPSE    | TENSION |
| CONDUCTOR  | 14"    | C    | -40'  |       |       |       |       |       |             |         |
|            |        |      |       |       |       |       |       | 3,390 | 1,880       | 348,000 |
| SURFACE    | 8-5/8" | 0    | to    | 2,380 | 28.00 | IJ-55 | LTC   | 0.86  | 1.69        | 5.17    |
|            |        |      |       |       |       |       |       | 7,780 | 6,350       | 278,000 |
| PRODUCTION | 4-1/2" | 0    | to    | 9,739 | 11.60 | I-80  | BTC   | 2.00  | 1.06        | 2.82    |
|            |        |      |       |       |       |       |       |       |             |         |

\*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.26

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 3,782 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 5,901 psi

#### **CEMENT PROGRAM**

|                      | FT. OF FILL | DESCRIPTION                               | SACKS       | EXCESS        | WEIGHT   | YIELD |
|----------------------|-------------|---|-------------|---------------|----------|-------|
| SURFACE LEAD         | 500'        | Premium cmt + 2% CaCl                     | 180         | 60%           | 15.80    | 1.15  |
| Option 1             |             | + 0.25 pps flocele                        |             |               |          |       |
| TOP OUT CMT (6 jobs) | 1,200'      | 20 gals sodium silicate + Premium cmt     | 270         | 0%            | 15.80    | 1.15  |
|                      |             | + 2% CaCl + 0.25 pps flocele              |             |               |          |       |
| SURFACE              |             | NOTE: If well will circulate water to sur | face, optio | n 2 will be ເ | utilized |       |
| Option 2 LEAD        | 1,880'      | 65/35 Poz + 6% Gel + 10 pps gilsonite     | 170         | 35%           | 11.00    | 3.82  |
|                      |             | + 0.25 pps Flocele + 3% salt BWOW         |             |               |          |       |
| TAIL                 | 500'        | Premium cmt + 2% CaCl                     | 150         | 35%           | 15.80    | 1.15  |
|                      |             | + 0.25 pps flocele                        |             |               |          |       |
| TOP OUT CMT          | as required | Premium cmt + 2% CaCl                     | as req.     |               | 15.80    | 1.15  |
| PRODUCTION LEAD      | 4,209'      | Premium Lite II +0.25 pps                 | 300         | 10%           | 11.00    | 3.38  |
|                      |             | celloflake + 5 pps gilsonite + 10% gel    |             |               |          |       |
|                      |             | + 0.5% extender                           |             |               |          |       |
| TAIL                 | 5,530'      | 50/50 Poz/G + 10% salt + 2% gel           | 1,070       | 10%           | 14.30    | 1.31  |
|                      |             | + 0.1% R-3                                |             |               |          |       |

 $<sup>{}^{\</sup>star}$ Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### **FLOAT EQUIPMENT & CENTRALIZERS**

| SURFACE    | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe |
|------------|--|
| PRODUCTION | Float shoe, 1 jt, float collar. No centralizers will be used.  |
|            |  |

#### **ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

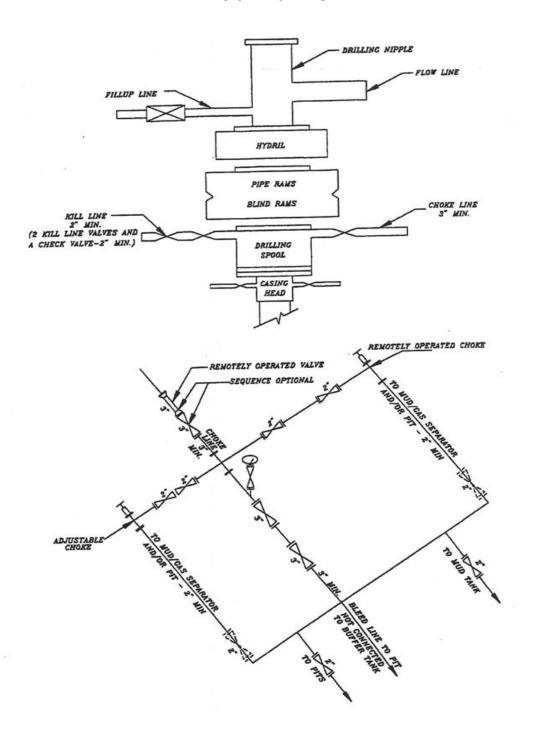
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

| Surveys will be taken at 1,000' minimum intervals.  |       |
|---|-------|
| Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized. |       |
| ENCINEED.   | DATE. |

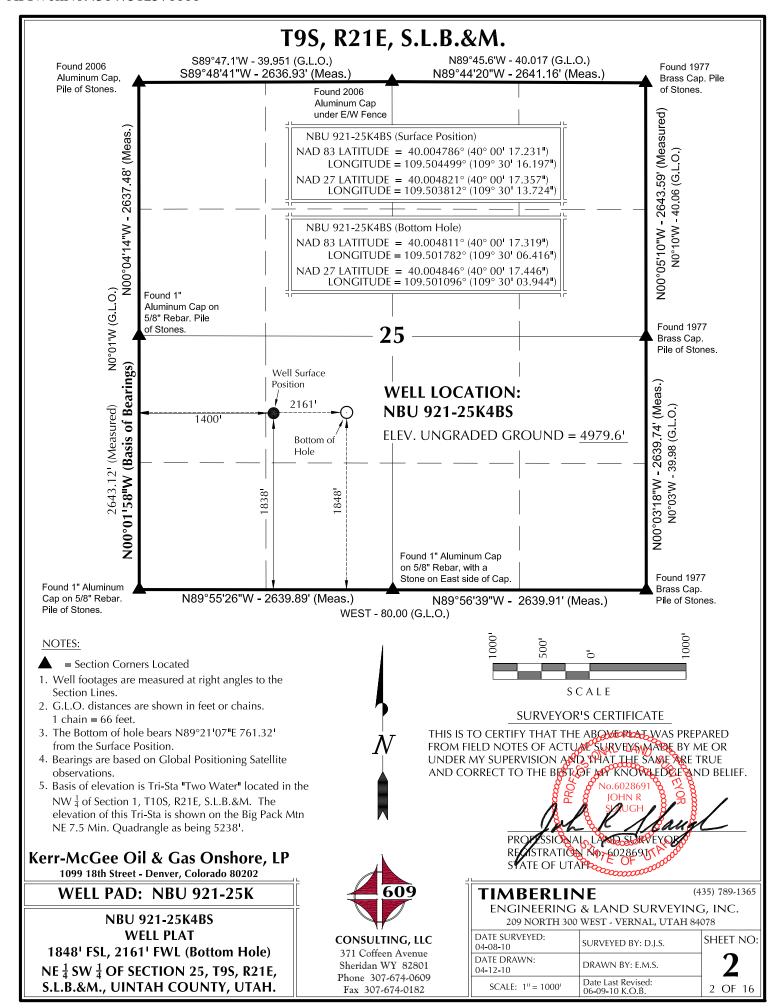
| DRILLING ENGINEER:       |                             | DATE: |  |
|--------------------------|-----------------------------|-------|--|
|                          | John Huycke / Emile Goodwin |       |  |
| DRILLING SUPERINTENDENT: |                             | DATE: |  |
|                          | John Merkel / Lovel Young   |       |  |

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-25K4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



|   |  |                                       | SURFACE PO: | SITION     |         |                        |            |  | В                           | OTTOM HOLE    |                               |                         |
|---|--|---------------------------------------|-------------|------------|---------|------------------------|------------|--|-----------------------------|---------------|-------------------------------|-------------------------|
| WELL NAME   |  | AD83                                  |             | NAD27      |         |                        |            | NAD8:  |                             | NAD           |                               |                         |
|   | LATITUDE   |                                       |             |            |         | FOOTAGES               | LATIT      |  | LONGITUDE                   | LATITUDE      |                               | FOOTAGE                 |
| BU<br>21-25L2AS   | 40°00'17.32<br>40.004813°                          | 7" 109°30'1<br>109.5044               |             |            |         | 1848' FSL<br>1402' FWL | 40.006     |  | 09°30'28.213"<br>09.507837° |               | 109°30'25.740"<br>109.507150° | 2423' FSL<br>465' FWL   |
| BU  | 40°00'17.23  |                                       |             |            | 13.724" | 1838' FSL              |            |  |                             | 40°00'17.446" |                               |                         |
| 21-25K4BS   | 40.004786°   | 109.5044                              |             |            |         | 1400' FWL              | 40.004     |  | 09.501782°                  |               | 109.501096°                   | 2161' FW                |
| BU  | 40°00'17.13  |                                       |             |            | 13.761" | 1829' FSL              |            |  |                             | 40°00'18.710" |                               | l                       |
| 21-25L4AS<br>BU   | 40.004760°<br>40°00'17.04                          | 109.5045<br>1" 109°30'1               |             |            |         | 1397' FWL              | 40.005     |  | 09.505612°<br>09°30'14.798" |               | 109.504925°                   | 1088 FW                 |
| 21-25N2BS   | 40.004734°   | 109*30*1                              |             |            |         | 1819' FSL<br>1394' FWL | 40.003     |  | 09°30°14./98°<br>09.504111° |               | 109°30'12.326"<br>109.503424° | 1260' FSI<br>  1508' FW |
|   |  | 1.03.30.13                            |             | TIVE COORD |         |                        | e Position |  |                             |               | 103,303,121                   | 1.500 111               |
| VELL NAME   | NORTH  | EAST                                  | WELL NAME   | NORTH      | EAST    |                        | NAME       | NORTH  |                             | WELL NAMI     | E NORTH                       | EAST                    |
| IBU   | 576.1  | -937.7'                               | NBU         | 8.6'       | 761.3   | NIDII                  |            | 146.6  |                             | NBU           | -559.3                        | 114.1'                  |
| 21-25L2AS   | 3/6.1  | -93/./                                | 921-25K4BS  | 0.0        | 761.3   | 921-2                  | 5L4AS      | 140.0  | -309.0                      | 921-25N2BS    | 5 -559.5                      | 114.1                   |
| 1   | 158°26'02'1<br>To Bottor                           | 7.566170                              |             |            |         |                        |            | $\frac{N_{1}6^{\circ}0_{1}}{A_{z=1}6_{.01}}$ | 986                         |               |                               |                         |
| $\begin{array}{c} \searrow \Lambda \\ \searrow N_{64^{\circ}3} \\ (T_{0}B_{0}) \end{array}$ | 158°26'02'N<br>170 Bottom<br>2295 389<br>1600 Hole | 7.566110<br>V 100.5><br>Hole)<br>2.00 |             |            |         | 10.                    |            |  | 5L2As                       | Az=89         | .35194°<br>7"E 761.32'        |                         |

GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°01'58"W.

# Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

# **WELL PAD - NBU 921-25K**

WELL PAD INTERFERENCE PLAT WELLS - NBU 921-25L2AS, NBU 921-25K4BS, NBU 921-25L4AS & NBU 921-25N2BS LOCATED IN SECTION 25, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.



# CONSULTING, LLC

371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

# **TIMBERLINE**

30

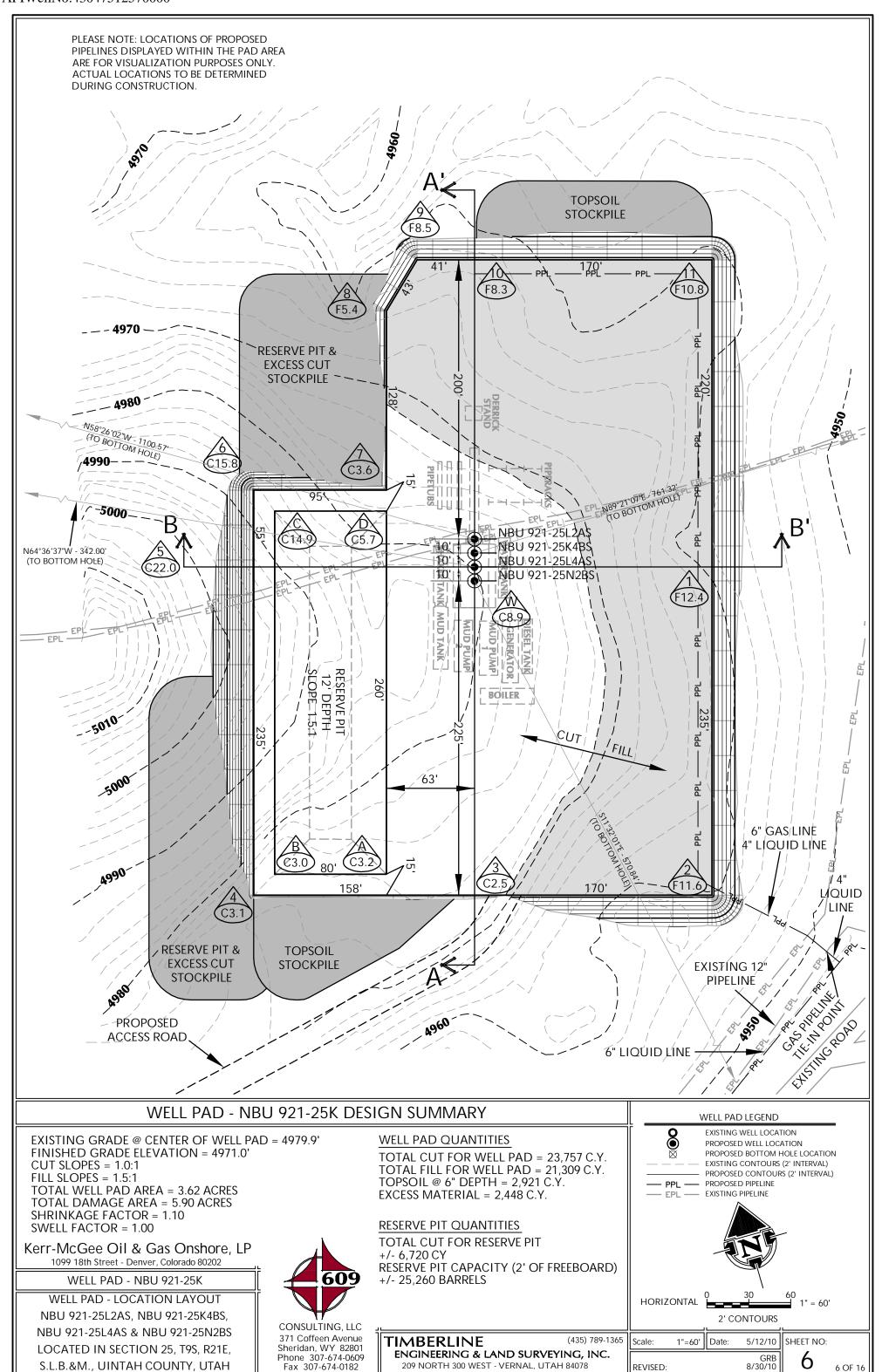
(435) 789-1365

09

ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE

| DATE SURVEYED:<br>04-08-10 | SURVEYED BY: D.J.S.                   | SHEET NO: |
|----------------------------|---------------------------------------|-----------|
| DATE DRAWN:<br>04-12-10    | DRAWN BY: E.M.S.                      | 5         |
| SCALE: 1" = 601            | Date Last Revised:<br>06-09-10 K.O.B. | 5 OF 16   |

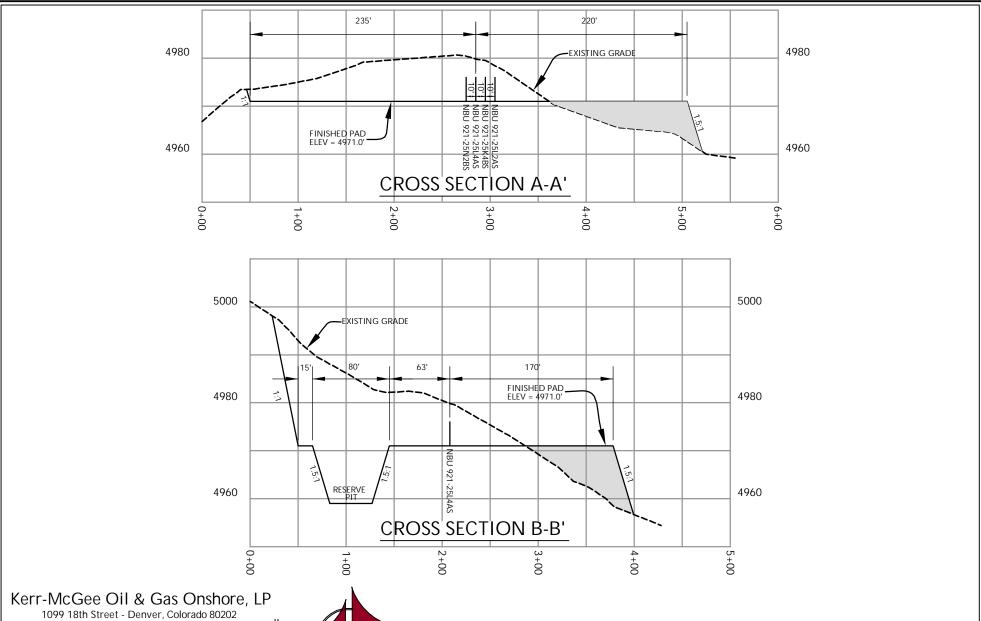


Fax 307-674-0182

REVISED:

6 OF 16



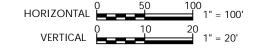


WELL PAD - NBU 921-25K

WELL PAD - CROSS SECTIONS
NBU 921-25L2AS, NBU 921-25K4BS,
NBU 921-25L4AS & NBU 921-25N2BS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

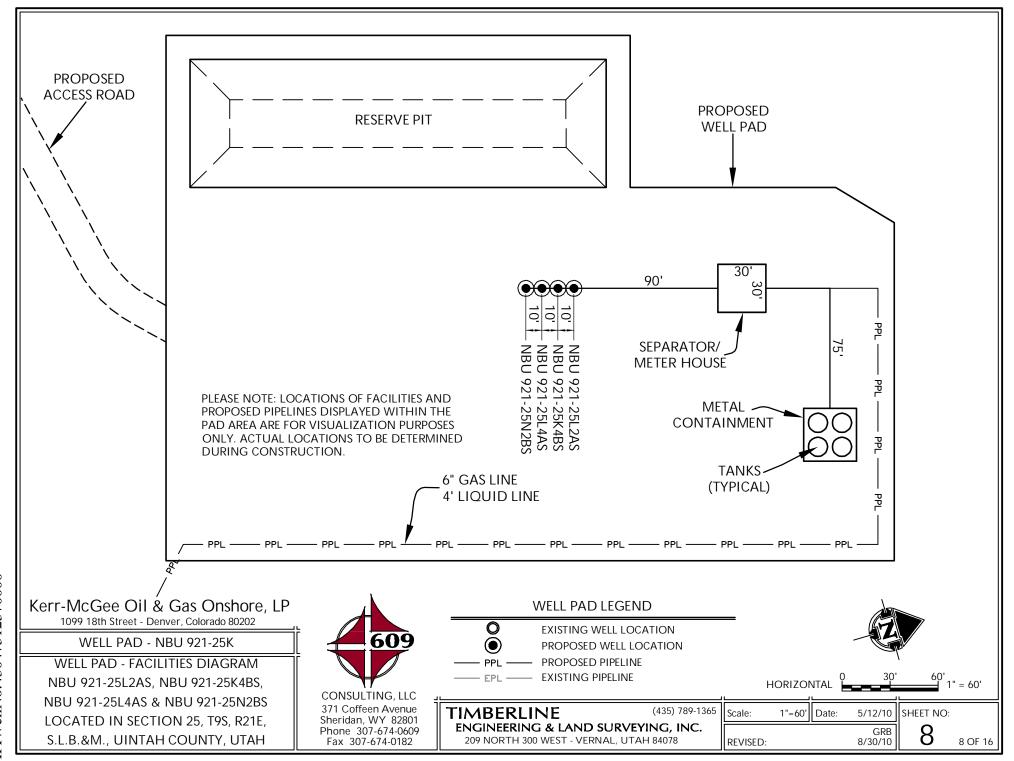


CONSULTING, LLC 371 Coffeen Avenue Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182



TIMBERLINE (435) 789-136 ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

| 55 | Scale:  | 1"=100' | Date: | 5/12/10        | SHEET NO: |         |
|----|---------|---------|-------|----------------|-----------|---------|
|    | REVISED | ):      |       | GRB<br>8/30/10 | 7         | 7 OF 16 |



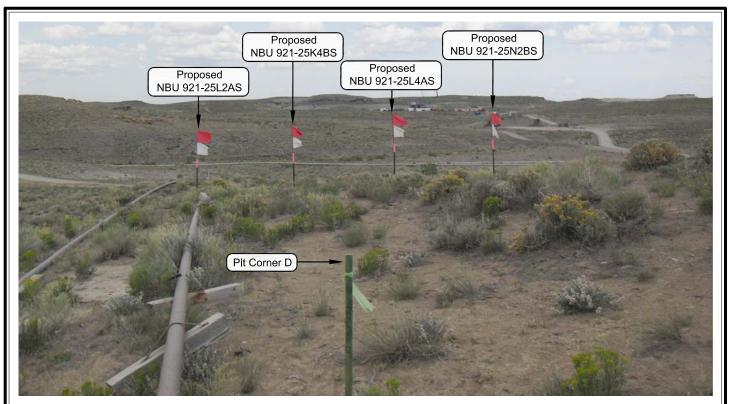


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

**CAMERA ANGLE: SOUTHEASTERLY** 



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

**CAMERA ANGLE: NORTHEASTERLY** 

# Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

# WELL PAD - NBU 921-25K

LOCATION PHOTOS NBU 921-25L2AS, NBU 921-25K4BS, NBU 921-25L4AS & NBU 921-25N2BS LOCATED IN SECTION 25, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.



# CONSULTING, LLC 371 Coffeen Avenue

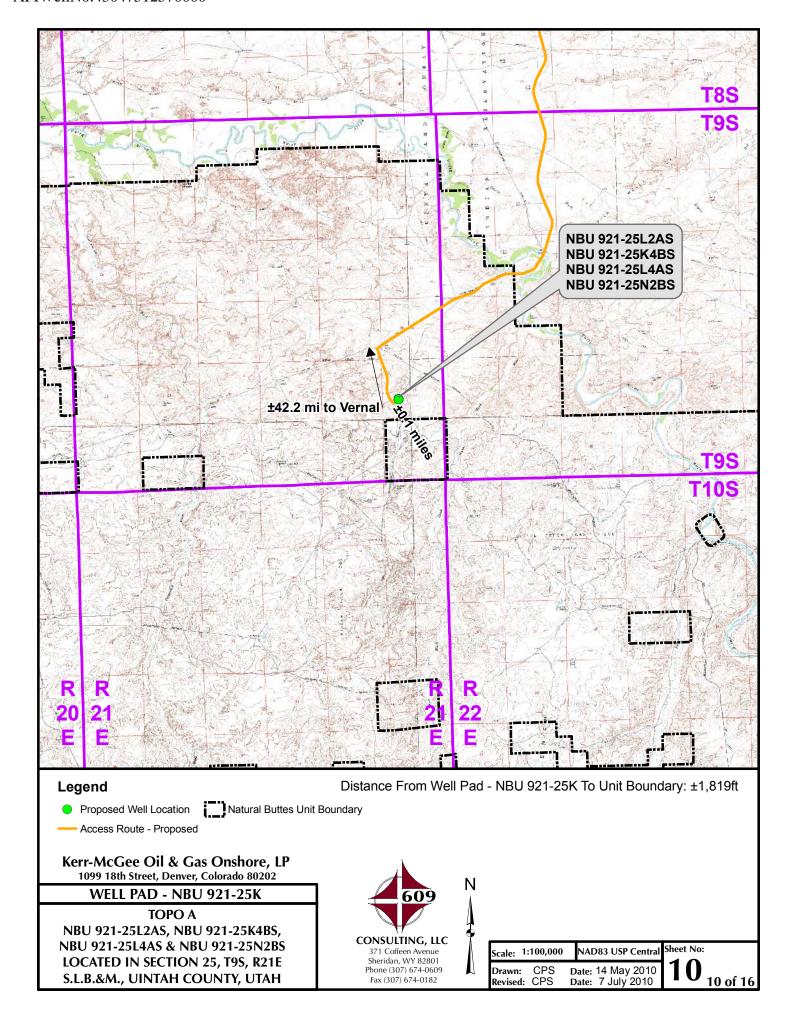
371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

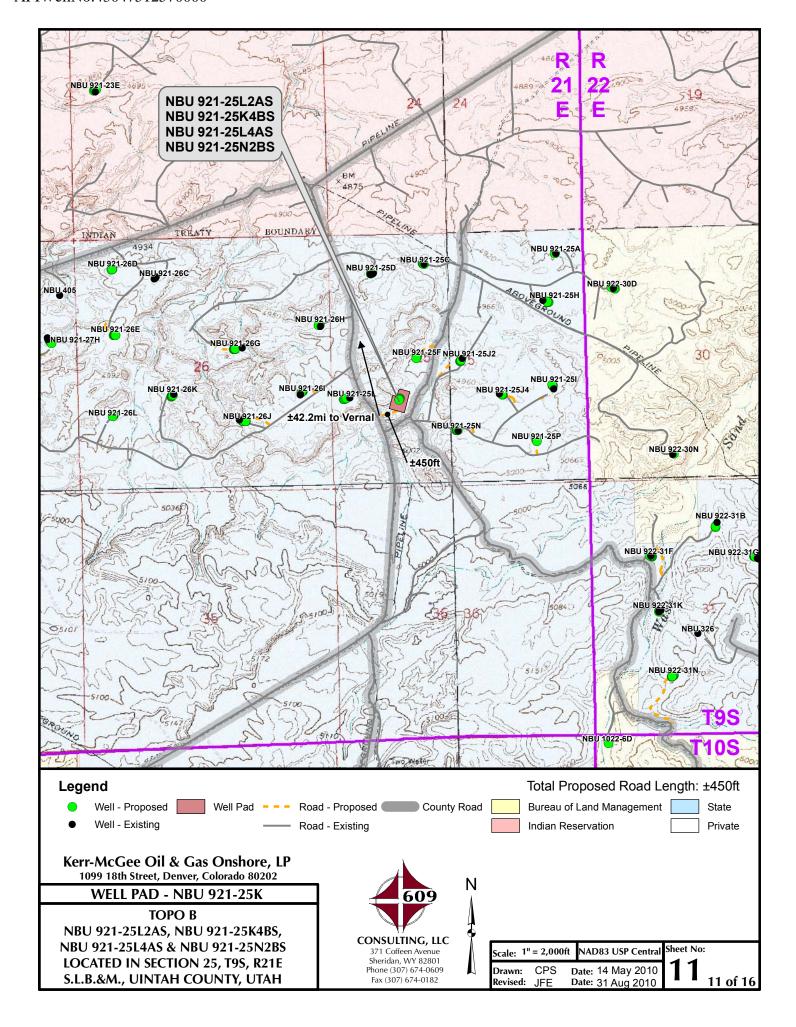
# TIMBERLINE

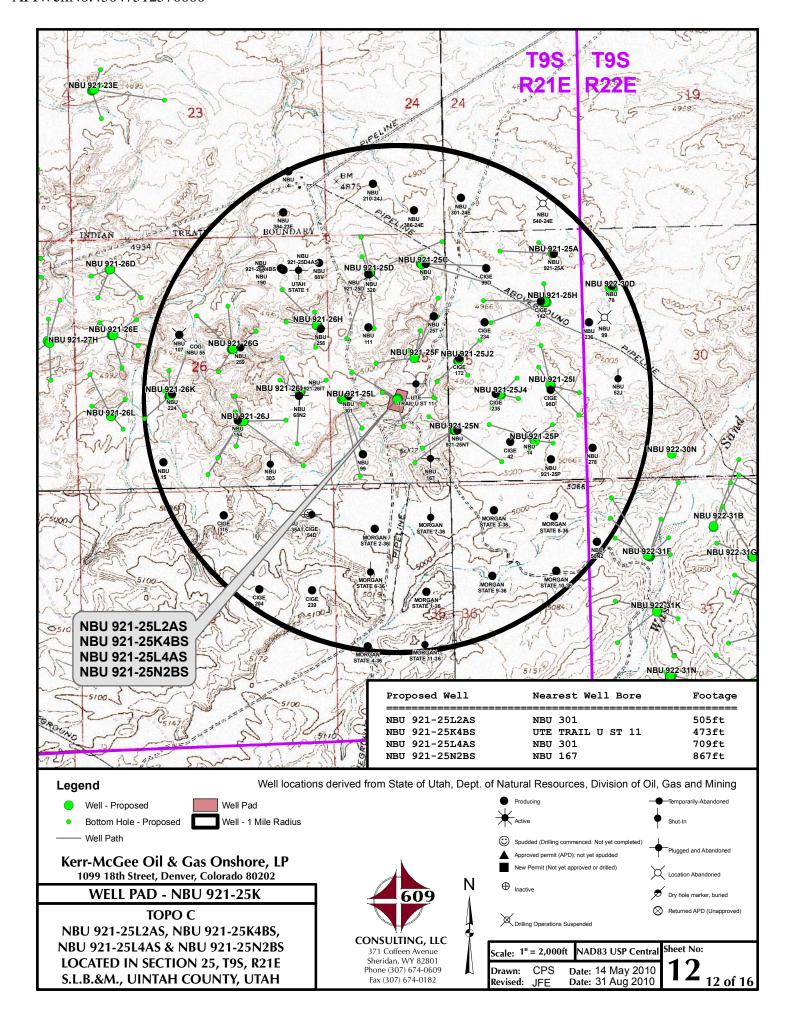
(435) 789-1365

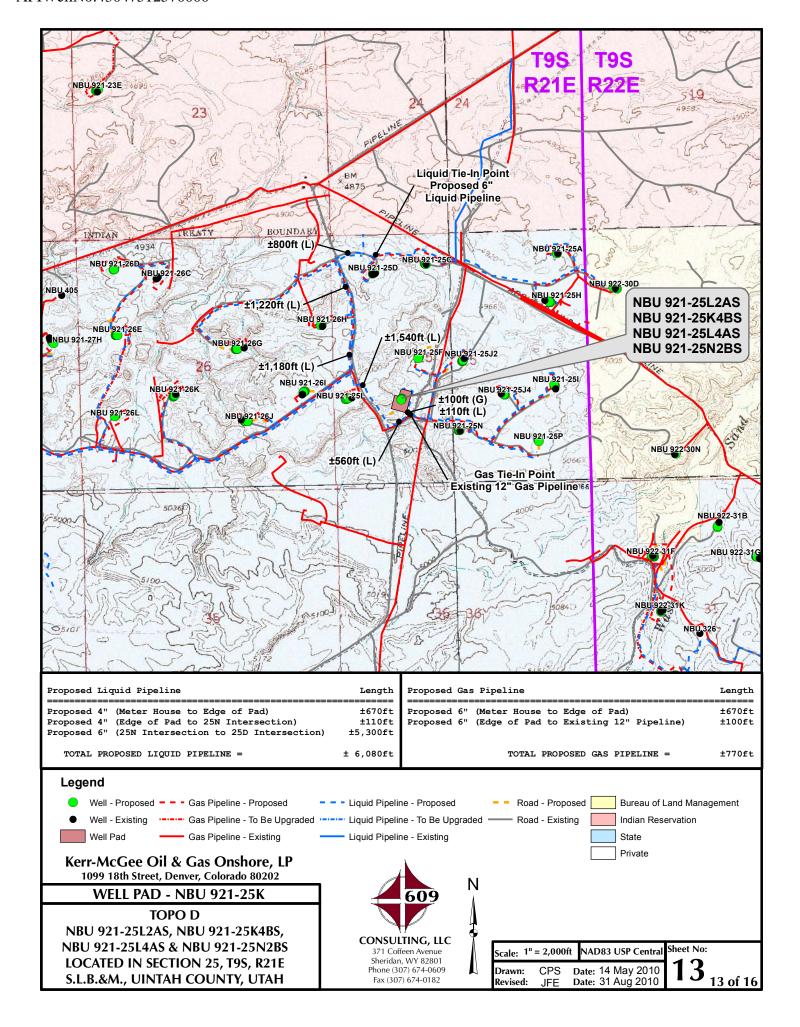
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

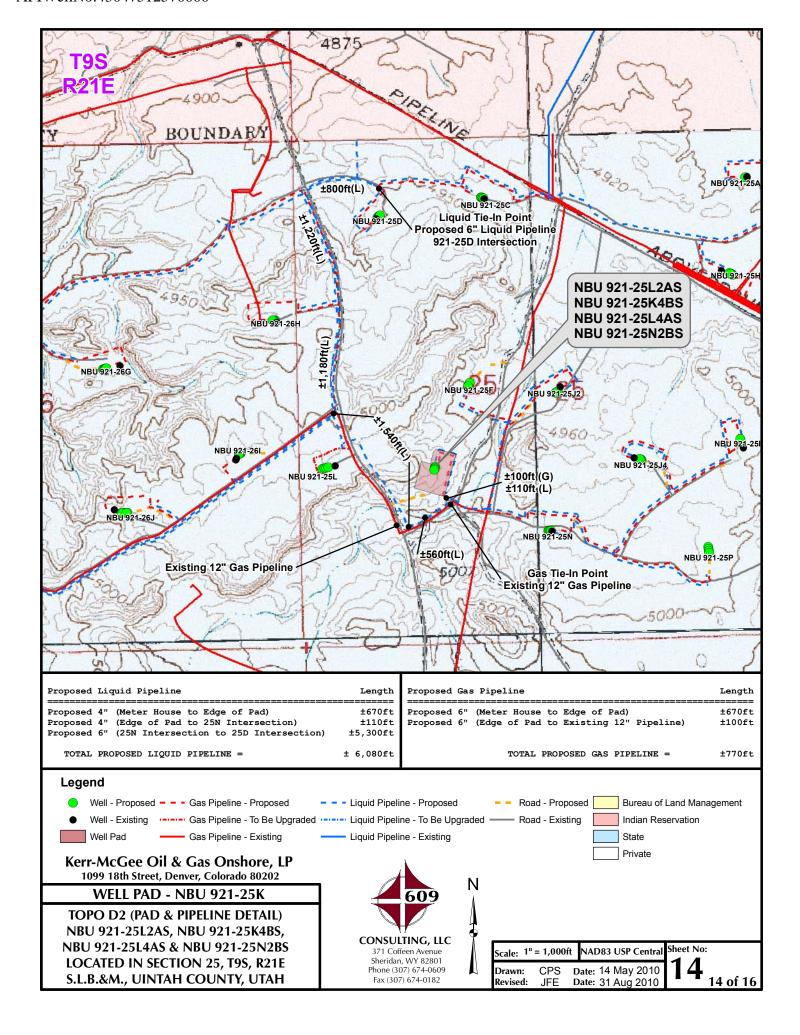
| DATE PHOTOS TAKEN:<br>04-08-10 | PHOTOS TAKEN BY: D.J.S. | SHEET NO: |
|--------------------------------|-------------------------|-----------|
| DATE DRAWN:<br>04-12-10        | DRAWN BY: E.M.S.        | 9         |
| Date Last Revised: 06-09-1     | 0 K.O.B.                | 9 OF 16   |

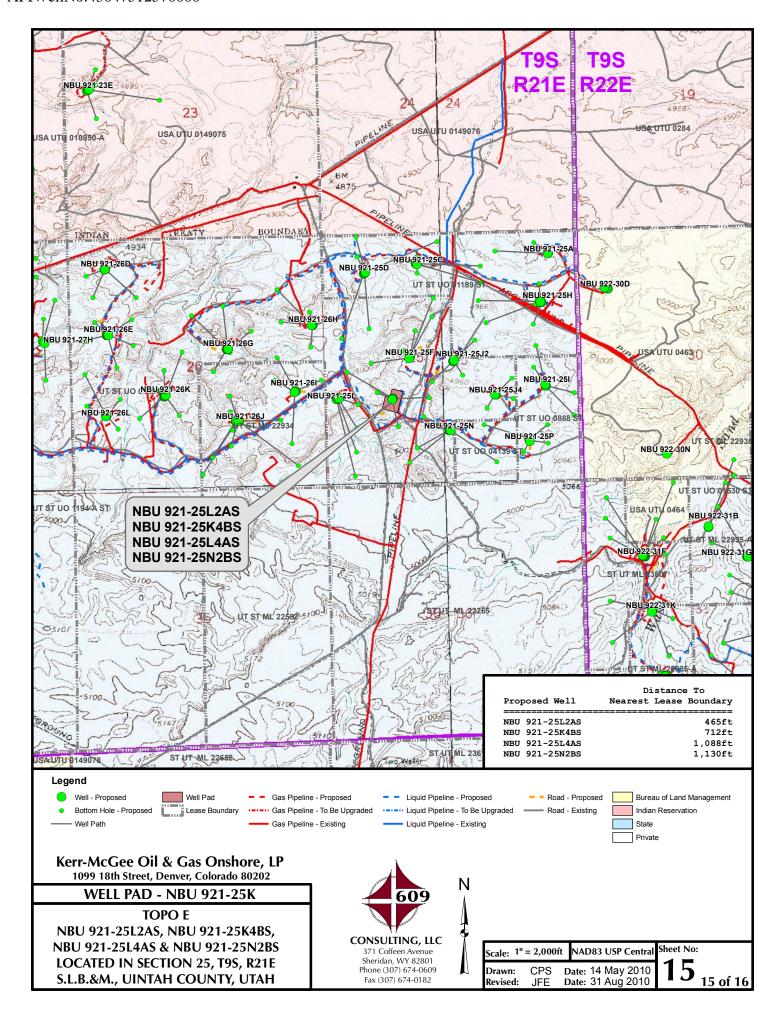












# Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 921-25K WELLS – NBU 921-25L2AS, NBU 921-25K4BS, NBU 921-25L4AS & NBU 921-25N2BS Section 25, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to the proposed access road to the northeast. Exit left and follow road flags in a northeasterly direction approximately 450 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 42.3 miles in a southerly direction.

'APIWellNo:43047512570000' Scientific Drilling Rocky Mountain Operations

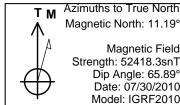
Project: Uintah County, UT UTM12

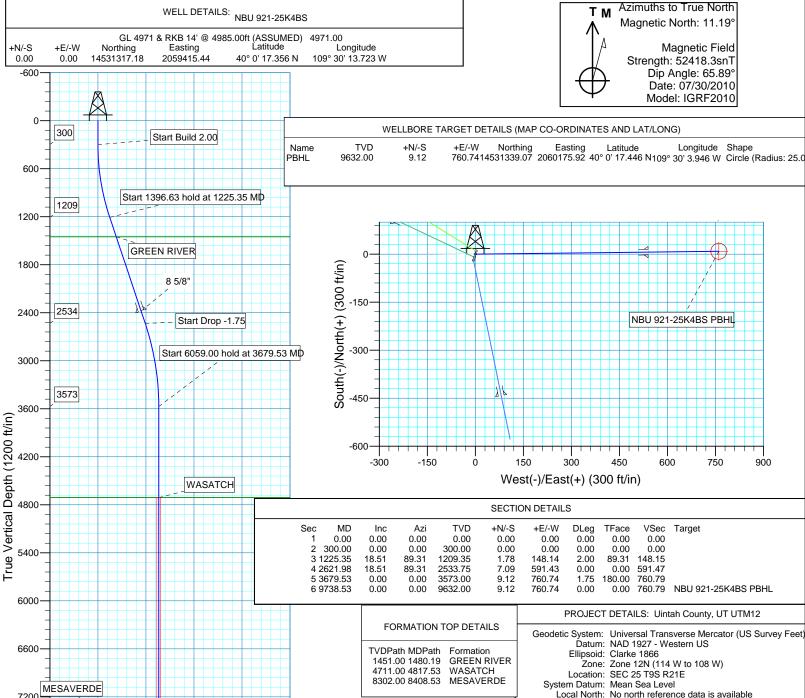
Site: NBU 921-25K Pad Well: NBU 921-25K4BS

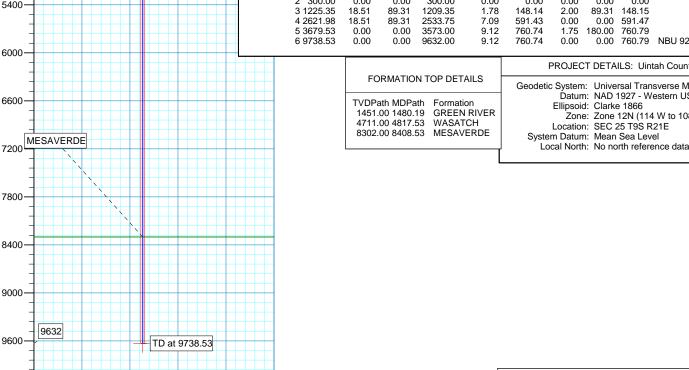
Wellbore: OH Design: Plan #1



# Kerr McGee Oil and Gas Onshore LP







1800

-600

600

1200

Vertical Section at 89.31° (1200 ft/in)

2400

Plan: Plan #1 (NBU 921-25K4BS/OH)

Created By: Robert H. Scott Date: 13:13, July 30 2010



# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 NBU 921-25K Pad NBU 921-25K4BS OH

Plan: Plan #1

# **Standard Planning Report**

30 July, 2010







EDM 2003.16 Single User Db Database:

Company: Kerr McGee Oil and Gas Onshore LP Project: Uintah County, UT UTM12

Site: NBU 921-25K Pad Well: NBU 921-25K4BS

Wellbore: OH Plan #1 Design:

Design

Local Co-ordinate Reference:

TVD Reference: **MD Reference:** North Reference:

**Survey Calculation Method:** 

Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

Minimum Curvature

Uintah County, UT UTM12 Project

Map System: Universal Transverse Mercator (US Survey Fee System Datum: Mean Sea Level

NAD 1927 - Western US Geo Datum: Zone 12N (114 W to 108 W) Map Zone:

Plan #1

Site NBU 921-25K Pad, SEC 25 T9S R21E

14,531,298.01 ft Northing: 40° 0' 17.167 N Site Position: Latitude: 109° 30' 13.795 W From: Lat/Long Easting: 2,059,410.16ft Longitude:

0.00 ft 0.96° **Position Uncertainty: Slot Radius:** in **Grid Convergence:** 

NBU 921-25K4BS, 1838' FSL 1400' FWL Well

**Well Position** +N/-S 0.00 ft Northing: 14,531,317.18 ft Latitude: 40° 0' 17.356 N +E/-W 0.00 ft 2,059,415.44 ft 109° 30' 13.723 W Easting: Longitude:

0.00 ft 4,971.00 ft **Position Uncertainty** Wellhead Elevation: ft **Ground Level:** 

Wellbore OH **Magnetics Model Name** Sample Date Declination **Dip Angle** Field Strength (nT) (°) (°) IGRF2010 07/30/2010 11.19 65.89 52,418

**Audit Notes: PLAN** 0.00 Version: Tie On Depth: Phase:

**Vertical Section:** +N/-S Direction Depth From (TVD) +E/-W (ft) (ft) (ft) (°) 0.00 0.00 89.31 0.00

**Plan Sections** Measured Vertical Dogleg **Build** Turn Inclination +N/-S Rate Depth **Azimuth** Depth +E/-W Rate Rate **TFO** (°/100ft) (ft) (°) (ft) (ft) (ft) (°/100ft) (°/100ft) **Target** (°) (°) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 300.00 0.00 0.00 300.00 0.00 0.00 0.00 0.00 0.00 0.00 1,225.35 18.51 89.31 1,209.35 1.78 148.14 2.00 2.00 0.00 89.31 18.51 89.31 2,533.75 7.09 591.43 0.00 0.00 0.00 0.00 2,621.98 3,679.53 0.00 0.00 9.12 760.74 1.75 -1.75 0.00 180.00 3,573.00 0.00 9.738.53 760.74 0.00 0.00 0.00 NBU 921-25K4BS F 0.00 0.00 9,632.00 9.12





Database: Company:

EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12
Site: NBU 921-25K Pad
Well: NBU 921-25K4BS

Wellbore: OH
Design: Plan #1

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

True

| nned Survey  |                               |   |  |                                      |  |  |                                      |  |                                      |
|--|-------------------------------|---|--|--------------------------------------|--|--|--------------------------------------|--|--------------------------------------|
| Measured<br>Depth<br>(ft)                                | Inclination<br>(°)            | Azimuth<br>(°)                            | Vertical<br>Depth<br>(ft)                                | +N/-S<br>(ft)                        | +E/-W<br>(ft)                                  | Vertical<br>Section<br>(ft)                    | Dogleg<br>Rate<br>(°/100ft)          | Build<br>Rate<br>(°/100ft)                   | Turn<br>Rate<br>(°/100ft)            |
| 0.00<br>100.00<br>200.00<br>300.00                       | 0.00<br>0.00<br>0.00          | 0.00<br>0.00<br>0.00<br>0.00              | 0.00<br>100.00<br>200.00<br>300.00                       | 0.00<br>0.00<br>0.00<br>0.00         | 0.00<br>0.00<br>0.00<br>0.00                   | 0.00<br>0.00<br>0.00<br>0.00                   | 0.00<br>0.00<br>0.00<br>0.00         | 0.00<br>0.00<br>0.00<br>0.00                 | 0.00<br>0.00<br>0.00<br>0.00         |
| Start Buil<br>400.00                                     |                               | 89.31                                     | 399.98   | 0.02                                 | 1.75   | 1.75   | 2.00                                 | 2.00   | 0.00                                 |
| 500.00<br>600.00<br>700.00<br>800.00<br>900.00           | 4.00<br>6.00<br>8.00<br>10.00 | 89.31<br>89.31<br>89.31<br>89.31<br>89.31 | 499.84<br>599.45<br>698.70<br>797.47<br>895.62           | 0.08<br>0.19<br>0.33<br>0.52<br>0.75 | 6.98<br>15.69<br>27.88<br>43.52<br>62.60       | 6.98<br>15.69<br>27.88<br>43.52<br>62.60       | 2.00<br>2.00<br>2.00<br>2.00<br>2.00 | 2.00<br>2.00<br>2.00<br>2.00<br>2.00<br>2.00 | 0.00<br>0.00<br>0.00<br>0.00<br>0.00 |
| 1,000.00<br>1,100.00<br>1,200.00<br>1,225.35             | 16.00<br>18.00<br>18.51       | 89.31<br>89.31<br>89.31<br>89.31          | 993.06<br>1,089.64<br>1,185.27<br>1,209.35               | 1.02<br>1.33<br>1.68<br>1.78         | 85.09<br>110.97<br>140.20<br>148.14            | 85.10<br>110.98<br>140.21<br>148.15            | 2.00<br>2.00<br>2.00<br>2.00         | 2.00<br>2.00<br>2.00<br>2.00                 | 0.00<br>0.00<br>0.00<br>0.00         |
| 1,300.00   | 6.63 hold at 122<br>18.51     | 2 <b>5.35 MD</b><br>89.31                 | 1,280.13   | 2.06                                 | 171.84   | 171.85   | 0.00                                 | 0.00   | 0.00                                 |
| 1,400.00<br>1,480.19                                     |                               | 89.31<br>89.31                            | 1,374.96<br>1,451.00                                     | 2.44<br>2.74                         | 203.58<br>229.03                               | 203.59<br>229.04                               | 0.00<br>0.00                         | 0.00<br>0.00                                 | 0.00<br>0.00                         |
| GREEN R  |                               | 00.04                                     | 4 400 70   | 0.00                                 | 005.00   | 005.00   | 0.00                                 | 0.00   | 0.00                                 |
| 1,500.00<br>1,600.00<br>1,700.00                         | 18.51                         | 89.31<br>89.31<br>89.31                   | 1,469.79<br>1,564.62<br>1,659.45                         | 2.82<br>3.20<br>3.58                 | 235.32<br>267.06<br>298.80                     | 235.33<br>267.08<br>298.82                     | 0.00<br>0.00<br>0.00                 | 0.00<br>0.00<br>0.00                         | 0.00<br>0.00<br>0.00                 |
| 1,800.00<br>1,900.00<br>2,000.00<br>2,100.00<br>2,200.00 | 18.51<br>18.51<br>18.51       | 89.31<br>89.31<br>89.31<br>89.31<br>89.31 | 1,754.27<br>1,849.10<br>1,943.93<br>2,038.76<br>2,133.59 | 3.96<br>4.34<br>4.72<br>5.10<br>5.48 | 330.54<br>362.28<br>394.02<br>425.76<br>457.50 | 330.56<br>362.30<br>394.04<br>425.79<br>457.53 | 0.00<br>0.00<br>0.00<br>0.00<br>0.00 | 0.00<br>0.00<br>0.00<br>0.00<br>0.00         | 0.00<br>0.00<br>0.00<br>0.00<br>0.00 |
| 2,300.00<br>2,400.00<br>2,459.85<br><b>8 5/8</b> "       | 18.51<br>18.51                | 89.31<br>89.31<br>89.31                   | 2,228.42<br>2,323.24<br>2,380.00                         | 5.86<br>6.24<br>6.47                 | 489.24<br>520.98<br>539.97                     | 489.27<br>521.01<br>540.01                     | 0.00<br>0.00<br>0.00                 | 0.00<br>0.00<br>0.00                         | 0.00<br>0.00<br>0.00                 |
| 2,500.00<br>2,600.00                                     |                               | 89.31<br>89.31                            | 2,418.07<br>2,512.90                                     | 6.62<br>7.00                         | 552.72<br>584.46                               | 552.76<br>584.50                               | 0.00<br>0.00                         | 0.00<br>0.00                                 | 0.00<br>0.00                         |
| 2,621.98   |                               | 89.31                                     | 2,533.75   | 7.09                                 | 591.43   | 591.47   | 0.00                                 | 0.00   | 0.00                                 |
| \$\text{Start Dro} 2,700.00 2,800.00 2,900.00 3,000.00   | 17.14<br>15.39<br>13.64       | 89.31<br>89.31<br>89.31<br>89.31          | 2,608.02<br>2,704.01<br>2,800.82<br>2,898.34             | 7.37<br>7.71<br>8.01<br>8.27         | 615.31<br>643.32<br>668.38<br>690.48           | 615.36<br>643.37<br>668.43<br>690.53           | 1.75<br>1.75<br>1.75<br>1.75         | -1.75<br>-1.75<br>-1.75<br>-1.75             | 0.00<br>0.00<br>0.00<br>0.00         |
| 3,100.00<br>3,200.00<br>3,300.00<br>3,400.00<br>3,500.00 | 8.39<br>6.64<br>4.89          | 89.31<br>89.31<br>89.31<br>89.31<br>89.31 | 2,996.49<br>3,095.18<br>3,194.32<br>3,293.81<br>3,393.56 | 8.50<br>8.70<br>8.85<br>8.97<br>9.06 | 709.59<br>725.69<br>738.77<br>748.81<br>755.82 | 709.64<br>725.74<br>738.82<br>748.87<br>755.87 | 1.75<br>1.75<br>1.75<br>1.75<br>1.75 | -1.75<br>-1.75<br>-1.75<br>-1.75<br>-1.75    | 0.00<br>0.00<br>0.00<br>0.00<br>0.00 |
| 3,600.00<br>3,679.53                                     | 0.00                          | 89.31<br>0.00                             | 3,493.48<br>3,573.00                                     | 9.10<br>9.12                         | 759.77<br>760.74                               | 759.83<br>760.79                               | 1.75<br>1.75                         | -1.75<br>-1.75                               | 0.00<br>0.00                         |
| Start 6059<br>3,700.00                                   | 9.00 hold at 367<br>0.00      | <b>79.53 MD</b> 0.00                      | 3,593.47   | 9.12                                 | 760.74   | 760.79   | 0.00                                 | 0.00   | 0.00                                 |
| 3,800.00<br>3,900.00                                     | 0.00                          | 0.00<br>0.00<br>0.00                      | 3,693.47<br>3,793.47                                     | 9.12<br>9.12<br>9.12                 | 760.74<br>760.74<br>760.74                     | 760.79<br>760.79<br>760.79                     | 0.00<br>0.00<br>0.00                 | 0.00<br>0.00<br>0.00                         | 0.00<br>0.00<br>0.00                 |
| 4,000.00<br>4,100.00                                     |                               | 0.00<br>0.00                              | 3,893.47<br>3,993.47                                     | 9.12<br>9.12                         | 760.74<br>760.74                               | 760.79<br>760.79                               | 0.00<br>0.00                         | 0.00<br>0.00                                 | 0.00<br>0.00                         |





Database: Company:

EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12
Site: NBU 921-25K Pad
Well: NBU 921-25K4BS

Well: NBU 92 Wellbore: OH Design: Plan #1 **Local Co-ordinate Reference:** 

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

True

| ned Survey                |                    |                |                           |               |                  |                             |                             |                            |                           |
|---------------------------|--------------------|----------------|---------------------------|---------------|------------------|-----------------------------|-----------------------------|----------------------------|---------------------------|
| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft)    | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) | Build<br>Rate<br>(°/100ft) | Turn<br>Rate<br>(°/100ft) |
| 4,200.00                  | 0.00               | 0.00           | 4,093.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 4,300.00                  | 0.00               | 0.00           | 4,193.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 4,400.00                  | 0.00               | 0.00           | 4,293.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 4,500.00                  | 0.00               | 0.00           | 4,393.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 4,600.00                  | 0.00               | 0.00           | 4,493.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 4,700.00                  | 0.00               | 0.00           | 4,593.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 4,800.00<br>4,817.53      | 0.00<br>0.00       | 0.00<br>0.00   | 4,693.47<br>4,711.00      | 9.12<br>9.12  | 760.74<br>760.74 | 760.79<br>760.79            | 0.00<br>0.00                | 0.00<br>0.00               | 0.00<br>0.00              |
| WASATCH                   |                    | 0.00           | 4,711.00                  | 9.12          | 700.74           | 700.79                      | 0.00                        | 0.00                       | 0.00                      |
|                           |                    | 0.00           | 4 702 47                  | 0.42          | 700.74           | 760.70                      | 0.00                        | 0.00                       | 0.00                      |
| 4,900.00<br>5,000.00      | 0.00<br>0.00       | 0.00<br>0.00   | 4,793.47<br>4,893.47      | 9.12<br>9.12  | 760.74<br>760.74 | 760.79<br>760.79            | 0.00<br>0.00                | 0.00<br>0.00               | 0.00<br>0.00              |
| 5,100.00                  | 0.00               | 0.00           | 4,993.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 5,200.00                  | 0.00               | 0.00           | 5,093.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 5,300.00                  | 0.00               | 0.00           | 5,193.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 5,400.00                  | 0.00               | 0.00           | 5,293.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 5,500.00                  | 0.00               | 0.00           | 5,393.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 5,600.00                  | 0.00               | 0.00           | 5,493.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 5,700.00<br>5,800.00      | 0.00<br>0.00       | 0.00<br>0.00   | 5,593.47<br>5,693.47      | 9.12<br>9.12  | 760.74<br>760.74 | 760.79<br>760.79            | 0.00<br>0.00                | 0.00<br>0.00               | 0.00<br>0.00              |
| •                         |                    |                | -                         |               |                  |                             |                             |                            |                           |
| 5,900.00<br>6,000.00      | 0.00<br>0.00       | 0.00<br>0.00   | 5,793.47<br>5,893.47      | 9.12<br>9.12  | 760.74<br>760.74 | 760.79<br>760.79            | 0.00<br>0.00                | 0.00<br>0.00               | 0.00<br>0.00              |
| 6,100.00                  | 0.00               | 0.00           | 5,893.47<br>5,993.47      | 9.12          | 760.74<br>760.74 | 760.79<br>760.79            | 0.00                        | 0.00                       | 0.00                      |
| 6,200.00                  | 0.00               | 0.00           | 6,093.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 6,300.00                  | 0.00               | 0.00           | 6,193.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 6,400.00                  | 0.00               | 0.00           | 6,293.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 6,500.00                  | 0.00               | 0.00           | 6,393.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 6,600.00                  | 0.00               | 0.00           | 6,493.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 6,700.00                  | 0.00               | 0.00           | 6,593.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 6,800.00                  | 0.00               | 0.00           | 6,693.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 6,900.00                  | 0.00<br>0.00       | 0.00           | 6,793.47                  | 9.12          | 760.74<br>760.74 | 760.79<br>760.79            | 0.00                        | 0.00                       | 0.00                      |
| 7,000.00<br>7,100.00      | 0.00               | 0.00<br>0.00   | 6,893.47<br>6,993.47      | 9.12<br>9.12  | 760.74<br>760.74 | 760.79<br>760.79            | 0.00<br>0.00                | 0.00<br>0.00               | 0.00<br>0.00              |
| 7,100.00                  | 0.00               | 0.00           | 7,093.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 7,300.00                  | 0.00               | 0.00           | 7,193.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 7,400.00                  | 0.00               | 0.00           | 7,293.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 7,500.00                  | 0.00               | 0.00           | 7,393.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 7,600.00                  | 0.00               | 0.00           | 7,493.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 7,700.00                  | 0.00               | 0.00           | 7,593.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 7,800.00                  | 0.00               | 0.00           | 7,693.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 7,900.00                  | 0.00               | 0.00           | 7,793.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 8,000.00<br>8,100.00      | 0.00<br>0.00       | 0.00<br>0.00   | 7,893.47<br>7,993.47      | 9.12<br>9.12  | 760.74<br>760.74 | 760.79<br>760.79            | 0.00<br>0.00                | 0.00<br>0.00               | 0.00<br>0.00              |
| 8,200.00                  | 0.00               | 0.00           | 8,093.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 8,300.00                  | 0.00               | 0.00           | 8,193.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 8,400.00                  | 0.00               | 0.00           | 8,293.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 8,408.53                  | 0.00               | 0.00           | 8,302.00                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| MESAVER                   |                    |                |                           |               |                  |                             |                             |                            |                           |
| 8,500.00                  | 0.00               | 0.00           | 8,393.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 8,600.00                  | 0.00               | 0.00           | 8,493.47                  | 9.12          | 760.74<br>760.74 | 760.79<br>760.79            | 0.00                        | 0.00                       | 0.00                      |
| 8,700.00                  | 0.00               | 0.00           | 8,593.47                  | 9.12          | 760.74           |                             | 0.00                        | 0.00                       | 0.00                      |
| 8,800.00                  | 0.00               | 0.00           | 8,693.47                  | 9.12          | 760.74           | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 8,900.00                  | 0.00               | 0.00<br>0.00   | 8,793.47                  | 9.12<br>9.12  | 760.74           | 760.79<br>760.79            | 0.00<br>0.00                | 0.00<br>0.00               | 0.00                      |



# Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25K Pad NBU 921-25K4BS OH

Plan: Plan #1

# **Standard Planning Report - Geographic**

30 July, 2010







Database: EDM 2003.16 Single User Db

Company: Kerr McGee Oil and Gas Onshore LP Project: Uintah County, UT UTM12

Site: NBU 921-25K Pad Well: NBU 921-25K4BS

Wellbore: OH Plan #1 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

Minimum Curvature

**Project** Uintah County, UT UTM12

Map System: Universal Transverse Mercator (US Survey Fee System Datum: Mean Sea Level

NAD 1927 - Western US Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

Site NBU 921-25K Pad, SEC 25 T9S R21E

14,531,298.01 ft Site Position: Northing: Latitude: 40° 0' 17.167 N From: Lat/Long Easting: 2,059,410.16ft Longitude: 109° 30' 13.795 W

**Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.96°

Well NBU 921-25K4BS, 1838' FSL 1400' FWL

Plan #1

Design

**Well Position** +N/-S 0.00 ft Northing: 14,531,317.18 ft Latitude: 40° 0' 17.356 N +E/-W 0.00 ft Easting: 2,059,415.44 ft Longitude: 109° 30' 13.723 W

**Position Uncertainty** 0.00 ft Wellhead Elevation: ft **Ground Level:** 4,971.00 ft

Wellbore ОН **Magnetics Model Name** Sample Date **Declination Dip Angle** Field Strength (°) (°) (nT) IGRF2010 07/30/2010 65.89 52,418 11.19

**Audit Notes:** 0.00 Version: Phase: **PLAN** Tie On Depth:

**Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction

(ft) (ft) (ft) (°) 0.00 0.00 0.00 89.31

**Plan Sections** Vertical Build Measured Turn Dogleg Depth Inclination Azimuth Depth +N/-S +E/-W Rate Rate Rate **TFO** (ft) (°) (ft) (ft) (ft) (°/100ft) (°/100ft) (°/100ft) (°) (°) **Target** 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 300.00 0.00 0.00 300.00 0.00 0.00 0.00 0.00 0.00 0.00 1,225.35 18.51 89.31 1,209.35 1.78 148.14 2.00 2.00 0.00 89.31 2,621.98 18.51 89.31 2,533.75 7.09 591.43 0.00 0.00 0.00 0.00 3,679.53 0.00 0.00 3,573.00 9.12 760.74 1.75 -1.75 0.00 180.00 9,738.53 760.74 0.00 0.00 0.00 0.00 NBU 921-25K4BS F 0.00 0.00 9,632.00 9.12





Database: Company:

EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12
Site: NBU 921-25K Pad
Well: NBU 921-25K4BS

Wellbore: OH
Design: Plan #1

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

True

| Design:                    | Plan #1                  |                       |                      |              |                  |                                |                              |                                    |  |
|----------------------------|--------------------------|-----------------------|----------------------|--------------|------------------|--------------------------------|------------------------------|------------------------------------|--|
| Planned Surv               | /ev                      |                       |                      |              |                  |                                |                              |                                    |  |
| Tiannea Car                | .cy                      |                       |                      |              |                  |                                |                              |                                    |  |
| Measured                   |                          |                       | Vertical             |              |                  | Мар                            | Мар                          |                                    |  |
| Depth                      | Inclination              |                       | Depth                | +N/-S        | +E/-W            | Northing                       | Easting                      |                                    |  |
| (ft)                       | (°)                      | (°)                   | (ft)                 | (ft)         | (ft)             | (ft)                           | (ft)                         | Latitude                           | Longitude                              |
| 0.00                       |                          | 0.00                  | 0.00                 | 0.00         | 0.00             | 14,531,317.18                  | 2,059,415.44                 | 40° 0' 17.356 N                    | 109° 30' 13.723 W                      |
| 100.00<br>200.00           |                          |                       | 100.00<br>200.00     | 0.00<br>0.00 | 0.00<br>0.00     | 14,531,317.18<br>14,531,317.18 | 2,059,415.44<br>2,059,415.44 | 40° 0' 17.356 N<br>40° 0' 17.356 N | 109° 30' 13.723 W<br>109° 30' 13.723 W |
| 300.00                     |                          |                       | 300.00               | 0.00         | 0.00             | 14,531,317.18                  | 2,059,415.44                 | 40° 0' 17.356 N                    | 109° 30' 13.723 W                      |
|                            | Build 2.00               | 0.00                  | 000.00               | 0.00         | 0.00             | ,00.,010                       | _,000,                       |                                    | .00 00 .020                            |
| 400.00                     | 2.00                     | 89.31                 | 399.98               | 0.02         | 1.75             | 14,531,317.23                  | 2,059,417.19                 | 40° 0' 17.356 N                    | 109° 30′ 13.701 W                      |
| 500.00                     |                          |                       | 499.84               | 0.08         | 6.98             | 14,531,317.38                  | 2,059,422.42                 | 40° 0' 17.356 N                    | 109° 30′ 13.634 W                      |
| 600.00                     |                          |                       | 599.45               | 0.19         | 15.69            | 14,531,317.63                  | 2,059,431.13                 | 40° 0' 17.357 N                    | 109° 30' 13.522 W                      |
| 700.00<br>800.00           |                          | 89.31<br>89.31        | 698.70<br>797.47     | 0.33<br>0.52 | 27.88<br>43.52   | 14,531,317.98                  | 2,059,443.31                 | 40° 0' 17.359 N<br>40° 0' 17.361 N | 109° 30' 13.365 W<br>109° 30' 13.164 W |
| 900.00                     |                          |                       | 895.62               | 0.52         | 43.52<br>62.60   | 14,531,318.43<br>14,531,318.98 | 2,059,458.95<br>2,059,478.02 | 40° 0' 17.361 N                    | 109° 30' 13.164 W                      |
| 1,000.00                   |                          |                       | 993.06               | 1.02         | 85.09            | 14,531,319.63                  | 2,059,500.50                 | 40° 0' 17.366 N                    | 109° 30' 12.630 W                      |
| 1,100.00                   |                          |                       | 1,089.64             | 1.33         | 110.97           | 14,531,320.37                  | 2,059,526.37                 | 40° 0' 17.369 N                    | 109° 30' 12.297 W                      |
| 1,200.00                   |                          |                       | 1,185.27             | 1.68         | 140.20           | 14,531,321.21                  | 2,059,555.60                 | 40° 0' 17.372 N                    | 109° 30' 11.921 W                      |
| 1,225.35                   |                          | 89.31                 | 1,209.35             | 1.78         | 148.14           | 14,531,321.44                  | 2,059,563.53                 | 40° 0' 17.373 N                    | 109° 30′ 11.819 W                      |
| Start 1<br>1,300.00        | <b>396.63 hold</b> 18.51 | at 1225.35 I<br>89.31 | <b>ND</b> 1,280.13   | 2.06         | 171.84           | 14,531,322.12                  | 2,059,587.22                 | 40° 0' 17.376 N                    | 109° 30' 11.515 W                      |
| 1,400.00                   |                          | 89.31                 | 1,374.96             | 2.00         | 203.58           | 14,531,323.04                  | 2,059,618.95                 | 40° 0' 17.380 N                    | 109° 30′ 11.515 W                      |
| 1,480.19                   |                          | 89.31                 | 1,451.00             | 2.74         | 229.03           | 14,531,323.77                  | 2,059,644.39                 | 40° 0' 17.383 N                    | 109° 30' 10.780 W                      |
| GREE                       | N RIVER                  |                       | ,                    |              |                  |                                |                              |                                    |  |
| 1,500.00                   | 18.51                    | 89.31                 | 1,469.79             | 2.82         | 235.32           | 14,531,323.95                  | 2,059,650.68                 | 40° 0' 17.383 N                    | 109° 30' 10.699 W                      |
| 1,600.00                   |                          | 89.31                 | 1,564.62             | 3.20         | 267.06           | 14,531,324.86                  | 2,059,682.40                 | 40° 0' 17.387 N                    | 109° 30′ 10.291 W                      |
| 1,700.00                   |                          | 89.31                 | 1,659.45             | 3.58         | 298.80           | 14,531,325.78                  | 2,059,714.13                 | 40° 0' 17.391 N                    | 109° 30' 9.883 W                       |
| 1,800.00<br>1,900.00       |                          | 89.31<br>89.31        | 1,754.27<br>1,849.10 | 3.96<br>4.34 | 330.54<br>362.28 | 14,531,326.69<br>14,531,327.60 | 2,059,745.86<br>2,059,777.59 | 40° 0' 17.395 N<br>40° 0' 17.398 N | 109° 30' 9.475 W<br>109° 30' 9.067 W   |
| 2,000.00                   |                          | 89.31                 | 1,943.93             | 4.72         | 394.02           | 14,531,328.52                  | 2,059,809.32                 | 40° 0' 17.402 N                    | 109° 30' 8.659 W                       |
| 2,100.00                   |                          | 89.31                 | 2,038.76             | 5.10         | 425.76           | 14,531,329.43                  | 2,059,841.05                 | 40° 0' 17.406 N                    | 109° 30' 8.251 W                       |
| 2,200.00                   |                          | 89.31                 | 2,133.59             | 5.48         | 457.50           | 14,531,330.34                  | 2,059,872.78                 | 40° 0' 17.410 N                    | 109° 30' 7.843 W                       |
| 2,300.00                   |                          | 89.31                 | 2,228.42             | 5.86         | 489.24           | 14,531,331.26                  | 2,059,904.51                 | 40° 0' 17.414 N                    | 109° 30' 7.435 W                       |
| 2,400.00                   |                          | 89.31<br>89.31        | 2,323.24<br>2,380.00 | 6.24<br>6.47 | 520.98<br>539.97 | 14,531,332.17                  | 2,059,936.24                 | 40° 0' 17.417 N<br>40° 0' 17.420 N | 109° 30' 7.027 W<br>109° 30' 6.783 W   |
| 2,459.85<br><b>8 5/8</b> " | 16.51                    | 09.31                 | 2,380.00             | 0.47         | 539.97           | 14,531,332.72                  | 2,059,955.23                 | 40° 0 17.420 N                     | 109° 30° 6.763 W                       |
| 2,500.00                   | 18.51                    | 89.31                 | 2,418.07             | 6.62         | 552.72           | 14,531,333.08                  | 2,059,967.97                 | 40° 0' 17.421 N                    | 109° 30' 6.619 W                       |
| 2,600.00                   |                          | 89.31                 | 2,512.90             | 7.00         | 584.46           | 14,531,334.00                  | 2,059,999.69                 | 40° 0' 17.425 N                    | 109° 30' 6.211 W                       |
| 2,621.98                   | 18.51                    | 89.31                 | 2,533.75             | 7.09         | 591.43           | 14,531,334.20                  | 2,060,006.67                 | 40° 0' 17.426 N                    | 109° 30' 6.122 W                       |
|                            | rop -1.75                |                       |                      |              |                  |                                |                              |                                    |  |
| 2,700.00                   |                          |                       | 2,608.02             | 7.37         | 615.31           | 14,531,334.88                  | 2,060,030.54                 | 40° 0' 17.428 N                    | 109° 30' 5.815 W                       |
| 2,800.00<br>2,900.00       |                          | 89.31<br>89.31        | 2,704.01<br>2,800.82 | 7.71<br>8.01 | 643.32<br>668.38 | 14,531,335.69<br>14,531,336.41 | 2,060,058.54<br>2,060,083.59 | 40° 0' 17.432 N<br>40° 0' 17.435 N | 109° 30' 5.455 W<br>109° 30' 5.133 W   |
| 3,000.00                   |                          |                       | 2,898.34             | 8.27         | 690.48           | 14,531,337.05                  | 2,060,065.59                 | 40° 0' 17.435 N<br>40° 0' 17.437 N | 109° 30' 4.849 W                       |
| 3,100.00                   |                          |                       | 2,996.49             | 8.50         | 709.59           | 14,531,337.60                  | 2,060,124.78                 | 40° 0' 17.440 N                    | 109° 30' 4.603 W                       |
| 3,200.00                   |                          |                       | 3,095.18             | 8.70         | 725.69           | 14,531,338.06                  | 2,060,140.88                 | 40° 0' 17.441 N                    | 109° 30' 4.396 W                       |
| 3,300.00                   |                          |                       | 3,194.32             | 8.85         | 738.77           | 14,531,338.44                  | 2,060,153.95                 | 40° 0' 17.443 N                    | 109° 30' 4.228 W                       |
| 3,400.00                   |                          | 89.31                 | 3,293.81             | 8.97         | 748.81           | 14,531,338.72                  | 2,060,164.00                 | 40° 0' 17.444 N                    | 109° 30′ 4.099 W                       |
| 3,500.00<br>3,600.00       |                          |                       | 3,393.56<br>3,493.48 | 9.06<br>9.10 | 755.82<br>759.77 | 14,531,338.93<br>14,531,339.04 | 2,060,171.00<br>2,060,174.95 | 40° 0' 17.445 N<br>40° 0' 17.445 N | 109° 30' 4.009 W<br>109° 30' 3.958 W   |
| 3,679.53                   |                          | 0.00                  | 3,573.00             | 9.12         | 760.74           | 14,531,339.07                  | 2,060,174.93                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                       |
| ·                          | 059.00 hold              |                       |                      |              |                  | , ,                            | · · · · · · ·                |                                    |  |
| 3,700.00                   | 0.00                     |                       | 3,593.47             | 9.12         | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                       |
| 3,800.00                   |                          | 0.00                  | 3,693.47             | 9.12         | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                       |
| 3,900.00                   |                          |                       | 3,793.47             | 9.12         | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                       |
| 4,000.00<br>4,100.00       |                          |                       | 3,893.47<br>3,993.47 | 9.12<br>9.12 | 760.74<br>760.74 | 14,531,339.07<br>14,531,339.07 | 2,060,175.92<br>2,060,175.92 | 40° 0' 17.446 N<br>40° 0' 17.446 N | 109° 30' 3.946 W<br>109° 30' 3.946 W   |
| 4,100.00                   | , 0.00                   | 0.00                  | 5,555.47             | 3.12         | 100.14           | 17,001,000.07                  | 2,000,170.32                 | TO 0 17.440 N                      | 100 00 0.040 00                        |





Database: Company:

EDM 2003.16 Single User Db

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12
Site: NBU 921-25K Pad
Well: NBU 921-25K4BS

Wellbore: OH
Design: Plan #1

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

True

| Design.                   |                    |                |                           |               |                  |                                |                              |                                    |                                      |
|---------------------------|--------------------|----------------|---------------------------|---------------|------------------|--------------------------------|------------------------------|------------------------------------|--------------------------------------|
| Planned Surve             | еу                 |                |                           |               |                  |                                |                              |                                    |                                      |
| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft)    | Map<br>Northing<br>(ft)        | Map<br>Easting<br>(ft)       | Latitude                           | Longitude                            |
| 4,200.00                  | 0.00               | 0.00           | 4,093.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 4,300.00                  | 0.00               | 0.00           | 4,193.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 4,400.00                  |                    | 0.00           | 4,293.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 4,500.00                  | 0.00               | 0.00           | 4,393.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 4,600.00                  | 0.00               | 0.00           | 4,493.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 4,700.00                  |                    | 0.00           | 4,593.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 4,800.00                  |                    | 0.00           | 4,693.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 4,817.53                  |                    | 0.00           | 4,711.00                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| WASAT                     |                    | 2.22           | 4 700 47                  | 0.40          | 700 74           | 44.504.000.07                  | 0.000.475.00                 | 400 01 47 440 11                   | 4000 001 0 0 40 144                  |
| 4,900.00                  | 0.00               | 0.00           | 4,793.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 5,000.00                  |                    | 0.00           | 4,893.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 5,100.00<br>5,200.00      |                    | 0.00<br>0.00   | 4,993.47<br>5,093.47      | 9.12<br>9.12  | 760.74<br>760.74 | 14,531,339.07<br>14,531,339.07 | 2,060,175.92<br>2,060,175.92 | 40° 0' 17.446 N<br>40° 0' 17.446 N | 109° 30' 3.946 W<br>109° 30' 3.946 W |
| 5,300.00                  |                    | 0.00           | 5,093.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30′ 3.946 W                     |
| 5,400.00                  |                    | 0.00           | 5,193.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30′ 3.946 W                     |
| 5,500.00                  |                    | 0.00           | 5,393.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 5,600.00                  |                    | 0.00           | 5,493.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 5,700.00                  |                    | 0.00           | 5,593.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 5,800.00                  |                    | 0.00           | 5,693.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 5,900.00                  |                    | 0.00           | 5,793.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,000.00                  |                    | 0.00           | 5,893.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,100.00                  | 0.00               | 0.00           | 5,993.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,200.00                  | 0.00               | 0.00           | 6,093.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,300.00                  | 0.00               | 0.00           | 6,193.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,400.00                  | 0.00               | 0.00           | 6,293.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,500.00                  |                    | 0.00           | 6,393.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,600.00                  |                    | 0.00           | 6,493.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,700.00                  |                    | 0.00           | 6,593.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,800.00                  |                    | 0.00           | 6,693.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 6,900.00                  |                    | 0.00           | 6,793.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 7,000.00                  |                    | 0.00           | 6,893.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 7,100.00                  |                    | 0.00           | 6,993.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 7,200.00                  |                    | 0.00           | 7,093.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 7,300.00                  |                    | 0.00           | 7,193.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N<br>40° 0' 17.446 N | 109° 30′ 3.946 W                     |
| 7,400.00                  |                    | 0.00<br>0.00   | 7,293.47<br>7,393.47      | 9.12<br>9.12  | 760.74<br>760.74 | 14,531,339.07<br>14,531,339.07 | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W<br>109° 30' 3.946 W |
| 7,500.00<br>7,600.00      |                    | 0.00           | 7,393.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92<br>2,060,175.92 | 40° 0' 17.446 N                    | 109° 30′ 3.946 W                     |
| 7,700.00                  |                    | 0.00           | 7,593.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30′ 3.946 W                     |
| 7,800.00                  |                    | 0.00           | 7,693.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 7,900.00                  |                    | 0.00           | 7,793.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30′ 3.946 W                     |
| 8,000.00                  |                    | 0.00           | 7,893.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,100.00                  |                    | 0.00           | 7,993.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,200.00                  |                    | 0.00           | 8,093.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,300.00                  |                    | 0.00           | 8,193.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,400.00                  |                    | 0.00           | 8,293.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,408.53                  |                    | 0.00           | 8,302.00                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| MESAV                     | ERDE               |                |                           |               |                  |                                |                              |                                    |                                      |
| 8,500.00                  | 0.00               | 0.00           | 8,393.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,600.00                  |                    | 0.00           | 8,493.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,700.00                  | 0.00               | 0.00           | 8,593.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,800.00                  |                    | 0.00           | 8,693.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 8,900.00                  | 0.00               | 0.00           | 8,793.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 9,000.00                  |                    | 0.00           | 8,893.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |
| 9,100.00                  | 0.00               | 0.00           | 8,993.47                  | 9.12          | 760.74           | 14,531,339.07                  | 2,060,175.92                 | 40° 0' 17.446 N                    | 109° 30' 3.946 W                     |





Database: Company:

EDM 2003.16 Single User Db

Company: Kerr McGee Oil and Gas Onshore LP Project: Uintah County, UT UTM12

Site: NBU 921-25K Pad Well: NBU 921-25K4BS

Wellbore: OH
Design: Plan #1

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

True

| anned Surv                | еу              |                |                           |               |               |                         |                        |                 |                  |
|---------------------------|-----------------|----------------|---------------------------|---------------|---------------|-------------------------|------------------------|-----------------|------------------|
| Measured<br>Depth<br>(ft) | Inclination (°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Map<br>Northing<br>(ft) | Map<br>Easting<br>(ft) | Latitude        | Longitude        |
| 9,200.00                  | 0.00            | 0.00           | 9,093.47                  | 9.12          | 760.74        | 14,531,339.07           | 2,060,175.92           | 40° 0' 17.446 N | 109° 30' 3.946 W |
| 9,300.00                  | 0.00            | 0.00           | 9,193.47                  | 9.12          | 760.74        | 14,531,339.07           | 2,060,175.92           | 40° 0' 17.446 N | 109° 30' 3.946 W |
| 9,400.00                  | 0.00            | 0.00           | 9,293.47                  | 9.12          | 760.74        | 14,531,339.07           | 2,060,175.92           | 40° 0' 17.446 N | 109° 30' 3.946 W |
| 9,500.00                  | 0.00            | 0.00           | 9,393.47                  | 9.12          | 760.74        | 14,531,339.07           | 2,060,175.92           | 40° 0' 17.446 N | 109° 30' 3.946 W |
| 9,600.00                  | 0.00            | 0.00           | 9,493.47                  | 9.12          | 760.74        | 14,531,339.07           | 2,060,175.92           | 40° 0' 17.446 N | 109° 30' 3.946 W |
| 9,700.00                  | 0.00            | 0.00           | 9,593.47                  | 9.12          | 760.74        | 14,531,339.07           | 2,060,175.92           | 40° 0' 17.446 N | 109° 30' 3.946 W |
| 9,738.53                  | 0.00            | 0.00           | 9,632.00                  | 9.12          | 760.74        | 14,531,339.07           | 2,060,175.92           | 40° 0' 17.446 N | 109° 30' 3.946 V |
| NBU 92                    | 21-25K4BS F     | BHL            |                           |               |               |                         |                        |                 |                  |

| Targets  |                  |                 |             |               |               |                  |                 |                 |                  |
|--|------------------|-----------------|-------------|---------------|---------------|------------------|-----------------|-----------------|------------------|
| Target Name - hit/miss target - Shape                  | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Northing<br>(ft) | Easting<br>(ft) | Latitude        | Longitude        |
| NBU 921-25K4BS P - plan hits target - Circle (radius 2 | center           | 0.00            | 9,632.00    | 9.12          | 760.74        | 14,531,339.07    | 2,060,175.92    | 40° 0' 17.446 N | 109° 30' 3.946 W |

| 0 | ( | _0.00, |
|---|---|--------|
|   |   |        |

| Casing Points |          |          |        |          |          |  |
|---------------|----------|----------|--------|----------|----------|--|
| ı             | Measured | Vertical |        | Casing   | Hole     |  |
|               | Depth    | Depth    |        | Diameter | Diameter |  |
|               | (ft)     | (ft)     | Name   | (in)     | (in)     |  |
|               | 2,459.85 | 2,380.00 | 8 5/8" | 8.625    | 11.000   |  |

| Formations |                                  |                           |                                     |           |            |                         |  |
|------------|----------------------------------|---------------------------|-------------------------------------|-----------|------------|-------------------------|--|
|            | Measured<br>Depth<br>(ft)        | Vertical<br>Depth<br>(ft) | Name                                | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |  |
|            | 8,408.53<br>4,817.53<br>1,480.19 | 4,711.00                  | MESAVERDE<br>WASATCH<br>GREEN RIVER |           |            |                         |  |

| Plan Annotations |          |            |         |                                  |
|------------------|----------|------------|---------|----------------------------------|
| Measured         | Vertical | Local Coor | dinates |                                  |
| Depth            | Depth    | +N/-S      | +E/-W   | Comment                          |
| (ft)             | (ft)     | (ft)       | (ft)    |                                  |
| 300.00           | 300.00   | 0.00       | 0.00    | Start Build 2.00                 |
| 1,225.35         | 1,209.35 | 1.78       | 148.14  | Start 1396.63 hold at 1225.35 MD |
| 2,621.98         | 2,533.75 | 7.09       | 591.43  | Start Drop -1.75                 |
| 3,679.53         | 3,573.00 | 9.12       | 760.74  | Start 6059.00 hold at 3679.53 MD |
| 9,738.53         | 9,632.00 | 9.12       | 760.74  | TD at 9738.53                    |





Database: Company: EDM 2003.16 Single User Db

Project:

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 Site: NBU 921-25K Pad

Well: NBU 921-25K4BS Wellbore: OH Plan #1 Design:

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference:

North Reference: **Survey Calculation Method:**  Well NBU 921-25K4BS

GL 4971 & RKB 14' @ 4985.00ft (ASSUMED) GL 4971 & RKB 14' @ 4985.00ft (ASSUMED)

Minimum Curvature

| anned Survey              |                    |                |                           |               |               |                             |                             |                            |                           |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|
| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) | Build<br>Rate<br>(°/100ft) | Turn<br>Rate<br>(°/100ft) |
| 9,100.00                  | 0.00               | 0.00           | 8,993.47                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 9,200.00                  | 0.00               | 0.00           | 9,093.47                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 9,300.00                  | 0.00               | 0.00           | 9,193.47                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 9,400.00                  | 0.00               | 0.00           | 9,293.47                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 9,500.00                  | 0.00               | 0.00           | 9,393.47                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 9,600.00                  | 0.00               | 0.00           | 9,493.47                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 9,700.00                  | 0.00               | 0.00           | 9,593.47                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| 9,738.53                  | 0.00               | 0.00           | 9,632.00                  | 9.12          | 760.74        | 760.79                      | 0.00                        | 0.00                       | 0.00                      |
| NBU 921-2                 | 5K4BS PBHL         |                |                           |               |               |                             |                             |                            |                           |

| Targets                               |                  |                 |             |               |               |                  |                 |                 |                  |
|---------------------------------------|------------------|-----------------|-------------|---------------|---------------|------------------|-----------------|-----------------|------------------|
| Target Name - hit/miss target - Shape | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Northing<br>(ft) | Easting<br>(ft) | Latitude        | Longitude        |
| NBU 921-25K4BS PE                     | center           | 0.00            | 9,632.00    | 9.12          | 760.74        | 14,531,339.07    | 2,060,175.92    | 40° 0' 17.446 N | 109° 30' 3.946 W |

- Circle (radius 25.00)

| Casing Points |                   |                   |        |                    |                  |
|---------------|-------------------|-------------------|--------|--------------------|------------------|
|               | Measured<br>Depth | Vertical<br>Depth |        | Casing<br>Diameter | Hole<br>Diameter |
|               | (ft)              | (ft)              | Name   | (in)               | (in)             |
|               | 2,459.85          | 2,380.00          | 3 5/8" | 8.625              | 11.000           |

| Formations |                           |                           |             |           |            |                         |  |
|------------|---------------------------|---------------------------|-------------|-----------|------------|-------------------------|--|
|            | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Name        | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |  |
|            | 8,408.53                  | 8,302.00                  | MESAVERDE   |           |            |                         |  |
|            | 4,817.53                  | 4,711.00                  | WASATCH     |           |            |                         |  |
|            | 1,480.19                  | 1,451.00                  | GREEN RIVER |           |            |                         |  |

| Plan Annotations |       |               |                   |               |                                  |
|------------------|-------|---------------|-------------------|---------------|----------------------------------|
| Meas             | ured  | Vertical      | Local Coordinates |               |                                  |
| Dep<br>(ft       |       | Depth<br>(ft) | +N/-S<br>(ft)     | +E/-W<br>(ft) | Comment                          |
|                  | 00.00 | 300.00        | 0.00              | 0.00          | Start Build 2.00                 |
|                  | 25.35 | 1,209.35      | 1.78              | 148.14        | Start 1396.63 hold at 1225.35 MD |
| 2,62             | 21.98 | 2,533.75      | 7.09              | 591.43        | Start Drop -1.75                 |
| 3,67             | 79.53 | 3,573.00      | 9.12              | 760.74        | Start 6059.00 hold at 3679.53 MD |
| 9,73             | 38.53 | 9,632.00      | 9.12              | 760.74        | TD at 9738.53                    |

### **NBU 921-25K4BS**

Surface: 1,838' FSL 1,400' FWL (NE/4SW/4) BHL: 1,848' FSL 2,161' FWL (NE/4SW/4)

#### **NBU 921-25L2AS**

Surface: 1,848' FSL 1,402' FWL (NE/4SW/4) BHL: 2,423' FSL 465' FWL (NW/4SW/4)

## **NBU 921-25L4AS**

Surface: 1,829' FSL 1,397' FWL (NE/4SW/4) BHL: 1,975' FSL 1,088' FWL (NW/4SW/4)

## **NBU 921-25N2BS**

Surface: 1,819' FSL 1,394' FWL (NE/4SW/4) BHL: 1,260' FSL 1,508' FWL (SE/4SW/4)

> Pad: NBU 921-25K Section 25 T9S R21E Mineral Lease: UO 1194 ST

Uintah County, Utah Operator: Kerr-McGee Oil & Gas Onshore LP

## MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

# A. <u>Existing Roads</u>:

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and

#### NBU 921-25K4BS / 25L2AS/ 25L4AS/ 25N2BS

utility corridors exceed 50', unless otherwise approved.

## **B.** Planned Access Roads:

Approximately ±450' (0.1 miles) of new access road to this pad location is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

# C. Location of Existing and Proposed Facilities:

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM. Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 790^{\circ}$  and the individual segments are broken up as follows:

 $\pm 690$ ' (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad.  $\pm 100$ ' (0.02 miles) –New 6" buried gas pipeline from the edge of pad to the existing 12" gas pipeline.

The total liquid gathering pipeline distance from the meter to the tie in point is  $\pm 6,100$ ' and the individual segments are broken up as follows:

 $\pm 690^{\circ}$  (0.1 miles) –New 4" buried liquid pipeline from the meter to the edge of the pad.  $\pm 110^{\circ}$  (0.02 miles) –New 4" buried liquid pipeline from the edge of pad to the NBU 921-25N pad intersection.

±5,300' (1.01 miles) –New 6" buried liquid pipeline from the NBU 921-25N pad intersection to the NBU 921-25D pad intersection.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

#### D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### **E.** Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

#### F. Methods of Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E

Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Ouray #1 SWD in Sec. 1 T9S R21E NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E

NBU 921-33F SWD in Sec. 33 T9S R21E NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner

will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

#### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

#### G. Ancillary Facilities:

None are anticipated.

#### H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

#### I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

#### **Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

#### **Final Reclamation**

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

#### **Seeding and Measures Common to Interim and Final Reclamation**

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-

vegetation. The site specific seed mix will be provided by SITLA.

#### J. Surface/Mineral Ownership:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

#### **K.** Other Information:

A Class I literature survey has been conducted by Montgomery Archaeological Consultants, Inc. (MOAC). For additional details please refer to report MOAC 10-125.

A paleontological reconnaissance has been completed by Intermountain Paleo-Consulting (IPC) and a report will be provided under separate cover.

A biological field survey was completed by Grasslands Consulting, Inc. on July 13, 2010. For additional details please refer to report GCI-293.

# 'APIWellNo:43047512570000'

#### M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst I Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Danielle Piernot

August 13, 2010

Date

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S 36 PROPOSED WELL LOCATIONS IN T9S, R21E, SECTION 25 (MOAC Report No. 10-125) UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

State of Utah
School and Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP 1368 South 1200 East Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc. P.O. Box 219 Moab, Utah 84532

MOAC Report No. 10-125

July 26, 2010

State of Utah Public Lands Policy Coordination Office Permit No. 117

United States Department of Interior (FLPMA)
Permit No. 10-UT-60122



# **Grasslands Consulting, Inc.**

4800 Happy Canyon Road, Suite 110, Denver, CO 80237 (303) 759-5377 Office (303) 759-5324 Fax

## SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

**Report Number:** GCI #293

**Report Date:** August 03, 2010

Operator: Kerr-McGee Oil & Gas Onshore LP

Well: NBU 921-25K well pad (Bores: NBU 921-25K4BS, NBU 921-25L4AS, NBU 921-

25L2AS, & NBU 921-25N2BS)

**Pipeline:** Associated pipeline leading to proposed well pad

Access Road: Associated road leading to proposed well pad

Location: Section 25, Township 9 South, Range 21 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)

Survey Date: July 13, 2010

**Observers:** Grasslands Consulting, Inc. Biologists: Brad Snopek, Jennie Sinclair, Jonathan

Sexauer, Adrienne Cunningham, Garrett Peterson and field technicians.





Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

July 15, 2010

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 921-25K4BS

T9S-R21E

Section 25: NESW surface and bottom hole

Surface: 1838' FSL, 1400' FWL Bottom Hole: 1848' FSL, 2161' FWL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-25K4BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance.
   Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

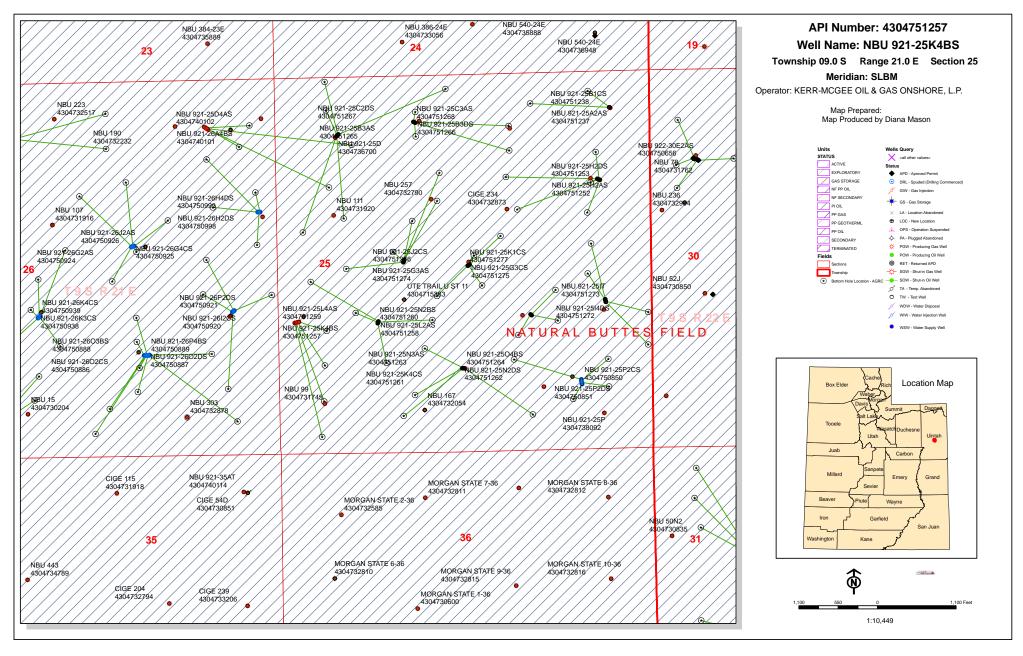
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Sr. Staff Landman

lor Makey



# **United States Department of the Interior**

## **BUREAU OF LAND MANAGEMENT**

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160

August 17, 2010

Memorandum

(UT-922)

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### NBU 921-25A Pad

43-047-51237 NBU 921-25A2AS Sec 25 T09S R21E 0489 FNL 0565 FEL BHL Sec 25 T09S R21E 0252 FNL 0865 FEL

43-047-51238 NBU 921-25B1CS Sec 25 T09S R21E 0489 FNL 0575 FEL BHL Sec 25 T09S R21E 0416 FNL 1676 FEL

#### NBU 921-25D Pad

43-047-51239 NBU 921-25C1AS Sec 25 T09S R21E 0800 FNL 0893 FWL BHL Sec 25 T09S R21E 0190 FNL 2405 FWL

43-047-51240 NBU 921-25D1BS Sec 25 T09S R21E 0807 FNL 0885 FWL BHL Sec 25 T09S R21E 0060 FNL 0716 FWL

43-047-51241 NBU 921-25E1CS Sec 25 T09S R21E 0821 FNL 0871 FWL BHL Sec 25 T09S R21E 1976 FNL 0947 FWL

43-047-51242 NBU 921-25E3AS Sec 25 T09S R21E 0828 FNL 0864 FWL

BHL Sec 25 T09S R21E 2162 FNL 0371 FWL

43-047-51251 NBU 921-25D1CS Sec 25 T09S R21E 0814 FNL 0878 FWL BHL Sec 25 T09S R21E 0460 FNL 0726 FWL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### NBU 921-25F Pad

43-047-51243 NBU 921-25F1BS Sec 25 T09S R21E 2580 FNL 1780 FWL Sec 25 T09S R21E 1366 FNL 2296 FWL 43-047-51244 NBU 921-25F1CS Sec 25 T09S R21E 2571 FNL 1784 FWL BHL Sec 25 T09S R21E 1754 FNL 2259 FWL 43-047-51245 NBU 921-25F3AS Sec 25 T09S R21E 2589 FNL 1776 FWL BHL Sec 25 T09S R21E 2034 FNL 1905 FWL BHL Sec 25 T09S R21E 2461 FNL 1628 FWL BHL Sec 25 T09S R21E 2461 FNL 1628 FWL 43-047-51247 NBU 921-25L1BS Sec 25 T09S R21E 2607 FNL 1768 FWL 43-047-51247 NBU 921-25L1BS Sec 25 T09S R21E 2607 FNL 1768 FWL

BHL Sec 25 T09S R21E 2597 FSL 0969 FWL

#### NBU 921-25H Pad

43-047-51248 NBU 921-25A3DS Sec 25 T09S R21E 1498 FNL 0736 FEL BHL Sec 25 T09S R21E 1110 FNL 0776 FEL 43-047-51249 NBU 921-25G1CS Sec 25 T09S R21E 1489 FNL 0754 FEL BHL Sec 25 T09S R21E 1489 FNL 1893 FEL 43-047-51250 NBU 921-25G2AS Sec 25 T09S R21E 1484 FNL 0763 FEL BHL Sec 25 T09S R21E 1439 FNL 2042 FEL BHL Sec 25 T09S R21E 1439 FNL 2042 FEL BHL Sec 25 T09S R21E 1439 FNL 0745 FEL BHL Sec 25 T09S R21E 1538 FNL 0857 FEL BHL Sec 25 T09S R21E 1538 FNL 0857 FEL BHL Sec 25 T09S R21E 1538 FNL 0857 FEL BHL Sec 25 T09S R21E 1502 FNL 0727 FEL BHL Sec 25 T09S R21E 1958 FNL 0913 FEL

#### NBU 921-25J Pad

43-047-51254 NBU 921-25J4AS Sec 25 T09S R21E 1878 FSL 1725 FEL BHL Sec 25 T09S R21E 1795 FSL 1360 FEL 43-047-51255 NBU 921-25J4CS Sec 25 T09S R21E 1886 FSL 1743 FEL BHL Sec 25 T09S R21E 1604 FSL 1920 FEL BHL Sec 25 T09S R21E 1882 FSL 1734 FEL BHL Sec 25 T09S R21E 2218 FSL 1381 FEL

#### NBU 921-25K Pad

43-047-51257 NBU 921-25K4BS Sec 25 T09S R21E 1838 FSL 1400 FWL BHL Sec 25 T09S R21E 1848 FSL 2161 FWL 43-047-51258 NBU 921-25L2AS Sec 25 T09S R21E 1848 FSL 1402 FWL BHL Sec 25 T09S R21E 2423 FSL 0465 FWL

| API #         | WE   | LL NAME      |       |    |      | LOCA'        | TION |     |      |      |
|---------------|------|--------------|-------|----|------|--------------|------|-----|------|------|
| (Proposed PZ  | WASA | ATCH-MESA VI | ERDE) | )  |      |              |      |     |      |      |
| 43-047-51259  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51260  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| NBU 921-25N 1 | Pad  |              | DCC   | 23 | 1035 | 1(211        | 1200 | 101 | 1000 | T W1 |
| 43-047-51261  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51262  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51263  | NBU  |              |       |    |      | R21E<br>R21E |      | _   |      |      |
| 43-047-51264  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| NBU 921-25C I | Pad  |              |       |    |      |              |      |     |      |      |
| 43-047-51265  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51266  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51267  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51268  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| NBU 921-25I I | Pad  |              |       |    |      |              |      |     |      |      |
| 43-047-51269  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51270  | NBU  |              |       |    |      | R21E<br>R21E |      | _   |      |      |
| 43-047-51271  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51272  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |
| 43-047-51273  | NBU  |              |       |    |      | R21E<br>R21E |      |     |      |      |

Page 4

API # WELL NAME

LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### NBU 921-25J2 Pad

43-047-51274 NBU 921-25G3AS Sec 25 T09S R21E 2611 FSL 2578 FEL BHL Sec 25 T09S R21E 2265 FNL 2136 FEL 43-047-51275 NBU 921-25G3CS Sec 25 T09S R21E 2606 FSL 2587 FEL BHL Sec 25 T09S R21E 2530 FNL 2518 FEL BHL Sec 25 T09S R21E 2530 FNL 2518 FEL BHL Sec 25 T09S R21E 2601 FSL 2596 FEL BHL Sec 25 T09S R21E 2310 FSL 2410 FEL BHL Sec 25 T09S R21E 2596 FSL 2410 FEL BHL Sec 25 T09S R21E 2596 FSL 2605 FEL BHL Sec 25 T09S R21E 2596 FSL 2631 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn-Michael L. Coulthard, o-Bureau of Land Management, ou-Branch of Minerals
amail-Michael Coulthard; o-Bureau of Land Management, ou-Branch of Minerals
pate-2010 Rg J 14:5454.

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:8-17-10

From: Jim Davis

To: Bonner, Ed; Garrison, LaVonne; Hill, Brad; Mason, Diana

CC: Bartlett, Floyd; Laura.Gianakos@anadarko.com; Piernot, Danielle; Upch...

**Date:** 9/2/2010 9:13 AM

**Subject:** SITLA approval of Kerr McGee wells **Attachments:** KMG approvals and paleo 9.1.2010.xlsx

The following wells have been approved by SITLA including arch clearance. Paleo clearance is also granted with stipulations as noted.

Full Paleo monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist.

```
NBU 922-29F4DS [API #4304751207] Full Monitoring IPC 10-08
 NBU 922-29G4CS [API #4304751208] Full Monitoring
                                                  IPC 10-08
 NBU 922-29J4BS [API #4304751209] Full Monitoring
                                                  IPC 10-08
 NBU 922-29K1DS [API #4304751210] Full Monitoring
                                                   IPC 10-08
 NBU 922-29G1AS [API #4304751194] Full Monitoring
                                                  IPC 10-06
 NBU 922-29G1DS [API #4304751195] Full Monitoring
                                                   IPC 10-06
 NBU 922-29G2BS [API #4304751196] Full Monitoring
                                                  IPC 10-06
 NBU 922-29G3BS [API #4304751197] Full Monitoring
                                                  IPC 10-06
NBU 921-25A3DS [API 4304751248]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25G1CS [API 4304751249]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25G2AS [API 4304751250]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25H2AS [API 4304751252]
                                    Full Monitoring
                                                  IPC 10-21
NBU 921-25H2DS [API 4304751253]
                                    Full Monitoring
                                                  IPC 10-21
NBU 921-25G3AS [API 4304751274]
                                    Full Monitoring
                                                  IPC 10-23
NBU 921-25G3CS [API 4304751275]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25J2CS [API 4304751276]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25K1CS [API 4304751277]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25A2AS [API 4304751237]
                                    Full Monitoring IPC 10-21
NBU 921-25B1CS [API 4304751238]
                                    Full Monitoring IPC 10-21
```

Spot Paleo Monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist at the beginning of construction and thereafter spot-monitored as paleontological conditions merit.

```
Spot Monitoring IPC 10-20
NBU 921-25C1AS [API 4304751239]
NBU 921-25D1BS [API 4304751240]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25D1CS [API 4304751251]
NBU 921-25E1CS [API 4304751241]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25E3AS [API 4304751242]
NBU 921-25F1BS [API 4304751243]
                                    Spot Monitoring IPC 10-21
NBU 921-25F1CS [API 4304751244]
                                    Spot Monitoring IPC 10-21
NBU 921-25F3AS [API 4304751245]
                                    Spot Monitoring IPC 10-21
NBU 921-25F3CS [API 4304751246]
                                    Spot Monitoring IPC 10-21
NBU 921-25L1BS [API 4304751247]
                                    Spot Monitoring IPC 10-21
NBU 921-25J1DS [API 4304751256]
                                    Spot Monitoring IPC 10-23
NBU 921-25J4AS [API 4304751254]
                                    Spot Monitoring IPC 10-23
NBU 921-25J4CS [API 4304751255]
                                    Spot Monitoring IPC 10-23
NBU 921-25K4BS [API 4304751257]
                                    Spot Monitoring IPC 10-22
NBU 921-25L2AS [API 4304751258]
                                    Spot Monitoring IPC 10-22
NBU 921-25L4AS [API 4304751259]
                                    Spot Monitoring IPC 10-22
                                    Spot Monitoring IPC 10-22
NBU 921-25N2BS [API 4304751260]
NBU 921-25K4CS [API 4304751261]
                                    Spot Monitoring IPC 10-23
NBU 921-25N2DS [API 4304751262]
                                    Spot Monitoring IPC 10-23
NBU 921-25N3AS [API 4304751263]
                                    Spot Monitoring IPC 10-23
```

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NBU 921-25O4BS [API 4304751264]
                                    Spot Monitoring IPC 10-23
                                    Spot Monitoring IPC 10-20
NBU 921-25B3AS [API 4304751265]
NBU 921-25B3DS [API 4304751266]
                                    Spot Monitoring IPC 10-20
NBU 921-25C2DS [API 4304751267]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25C3AS [API 4304751268]
NBU 921-25IT [API 4304751273]
                                    Spot Monitoring IPC 10-23
NBU 921-25H3DS [API 4304751269]
                                    Spot Monitoring IPC 10-23
NBU 921-25I2AS [API 4304751270]
                                    Spot Monitoring IPC 10-23
NBU 921-25I4AS [API 4304751271]
                                    Spot Monitoring IPC 10-23
NBU 921-25I4DS [API 4304751272]
                                    Spot Monitoring IPC 10-23
NBU 922-29A1BS [API #4304751183]
                                    Spot Monitoring IPC 10-06
 NBU 922-29A1CS [API #4304751184] Spot Monitoring IPC 10-06
 NBU 922-29A4CS [API #4304751185] Spot Monitoring IPC 10-06
 NBU 922-29H1BS [API #4304751186] Spot Monitoring IPC 10-06
 NBU 922-29B2CS [API #4304751187] Spot Monitoring IPC 10-06
 NBU 922-29B4AS [API #4304751188] Spot Monitoring IPC 10-06
                                                             (SITLA surf/ Fed Min)
 NBU 922-29C2AS [API #4304751189] Spot Monitoring IPC 10-06
                                                             (SITLA surf/ Fed Min)
 NBU 922-29C4AS [API #4304751190] Spot Monitoring IPC 10-06
 NBU 922-29B1AS [API #4304751191] Spot Monitoring IPC 10-06
 NBU 922-29B1DS [API #4304751192] Spot Monitoring IPC 10-06
 NBU 922-29B2BS [API #4304751193] Spot Monitoring IPC 10-06
 NBU 922-29D4DS [API #4304751198] Spot Monitoring IPC 10-05
 NBU 922-29E3BS [API #4304751199] Spot Monitoring IPC 10-05
 NBU 922-29F3AS [API #4304751200] Spot Monitoring IPC 10-05
 NBU 922-29F3BS [API #4304751201] Spot Monitoring IPC 10-05
 NBU 922-29G4AS [API #4304751202] Spot Monitoring IPC 10-06
 NBU 922-29H1CS [API #4304751203] Spot Monitoring IPC 10-06
 NBU 922-29H4CS [API #4304751204] Spot Monitoring IPC 10-06
 NBU 922-2911BS [API #4304751205] Spot Monitoring IPC 10-06
 NBU 922-29I1CS [API #4304751206] Spot Monitoring IPC 10-06
 NBU 922-29K2CS [API #4304751211] Spot Monitoring IPC 10-07
 NBU 922-29K4AS [API #4304751212] Spot Monitoring IPC 10-07
 NBU 922-29L1AS [API #4304751213] Spot Monitoring IPC 10-07
 NBU 922-29L2BS [API #4304751214] Spot Monitoring IPC 10-07
 NBU 922-29L2CS [API #4304751215] Spot Monitoring IPC 10-07
 NBU 922-29L3CS [API #4304751216] Spot Monitoring IPC 10-07
 NBU 922-29M2AS [API #4304751217] Spot Monitoring IPC 10-07
 NBU 922-29N2BS [API #4304751218] Spot Monitoring IPC 10-07
 NBU 922-29N3BS [API #4304751219] Spot Monitoring IPC 10-07
 NBU 922-30I4BS [API #4304751220] Spot Monitoring IPC 10-07 (SITLA surf/ Fed Min)
 NBU 922-30I4CS [API #4304751221] Spot Monitoring IPC 10-07 (SITLA surf/Fed Min)
 NBU 922-29J4CS [API #4304751222] Spot Monitoring IPC 10-08
 NBU 922-29N1BS [API #4304751223] Spot Monitoring IPC 10-08
 NBU 922-29O1CS [API #4304751224] Spot Monitoring IPC 10-08
```

That's quite a list, so I'm attaching a quick-and-dirty spreadsheet of the same data. This may be helpful to some of you.

Thanks.

-Jim

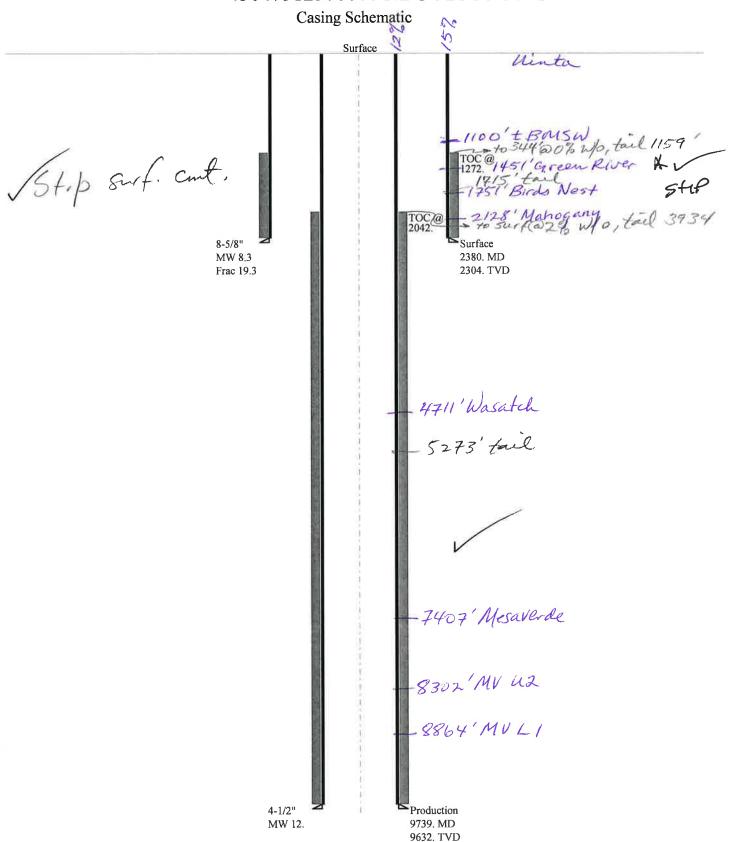
'APIWellNo:43047512570000'

Jim Davis Utah Trust Lands Administration jimdavis1@utah.gov Phone: (801) 538-5156

# BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-25K4BS 43047512570000

| Well Name                   |                        | KERR-MCGEE     | OI  | IL & GAS ONSHOR | RE | , L.P. NBU 921-2 | 25K4     | K4BS 4304751251   |
|-----------------------------|------------------------|----------------|-----|-----------------|----|------------------|----------|---|
| String                      |                        | Surf           | T   | Prod            | Ī  |                  | T        |   |
| Casing Size(")              |                        | 8.625          | 1   | 4.500           | l  |                  | Ī        |   |
| Setting Depth (TVD)         |                        | 2380           | 1   | 9632            | li |                  | Ī        |   |
| Previous Shoe Setting Dep   | th (TVD)               | 40             | 1   | 2380            | ľ  |                  | Ť        |   |
| Max Mud Weight (ppg)        |                        | 8.3            | 1   | 12.0            | ľ  | ,                | Ť        |   |
| BOPE Proposed (psi)         |                        | 500            | †   | 5000            | ľ  | <u></u>          | Ť        | <u>,                                    </u>            |
| Casing Internal Yield (psi) |                        | 3390           | †   | 7780            | ľ  |                  | ľ        | <u>,                                    </u>            |
| Operators Max Anticipate    | d Pressure (psi)       | 5876           | †   | 11.7            | ľ  |                  | ľ        | <u></u>   |
| 1                           | u /                    | 100.0          | _   | <u>,</u>        | Ľ  |                  | Į.       | <u>                                     </u>            |
| Calculations                | Sur                    | rf String      |     |                 |    | 8.6              | 525      | 25 "  |
| Max BHP (psi)               |                        | .052*Set       | tiı | ng Depth*M      | W  | /= 1031          |          |   |
|                             |                        |                |     |                 |    |                  |          | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi)            | Ma                     | ax BHP-(0.12   | 2*  | Setting Deptl   | h) | )= 745           |          | NO air drill  |
| MASP (Gas/Mud) (psi)        | Ma                     | ax BHP-(0.22   | 2*  | Setting Deptl   | h) | )= 507           |          | NO OK   |
|                             |                        |                | _   |                 | _  |                  |          | *Can Full Expected Pressure Be Held At Previous Shoe?   |
| Pressure At Previous Shoe   | Max BHP22*(Setting I   | Depth - Previo | οι  | us Shoe Dept    | h) | )= 516           |          | NO Reasonable depth in area                             |
| Required Casing/BOPE To     |                        |                |     |                 |    | 2373             |          | psi   |
| *Max Pressure Allowed @     | Previous Casing Shoe=  |                |     |                 |    | 40               |          | psi *Assumes 1psi/ft frac gradient                      |
| Calculations                | Duc                    | od String      | _   |                 | _  | 1.5              | 500      | 00 "  |
| Max BHP (psi)               | 110                    |                | tii | ng Depth*M      | \X |                  | -        |   |
| Wax Bill (psi)              |                        | .032 301       |     | ing Deptir ivi  | ** | /= 6010          |          | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi)            | M:                     | ax BHP-(0.12   | )*  | Setting Deptl   | h) | )= 4854          | _        | YES YES   |
| MASP (Gas/Mud) (psi)        |                        |                | _   | Setting Depti   | _  |                  | =        | YES OK  |
| (Gastilla) (psi)            | 1410                   | IX BIII (0.22  | _   | Setting Depti   |    | 3891             | _        | *Can Full Expected Pressure Be Held At Previous Shoe?   |
| Pressure At Previous Shoe   | Max BHP- 22*(Setting I | Denth - Previo | 01  | ıs Shoe Dent    | h) | )= 4415          | _        | NO Reasonable   |
| Required Casing/BOPE To     |                        | 3 cp (11 c ) 1 |     | as shot Bept    |    | 5000             | =        | psi   |
| *Max Pressure Allowed @     |                        |                |     |                 | _  | 2380             | =        | psi *Assumes 1psi/ft frac gradient                      |
| Max 11 essure 11 nowed w    | Trevious Casing Shoc   |                |     |                 | _  | 2380             | _        | psi /issumes ipsi/it nue grudent                        |
| Calculations                | :                      | String         |     |                 |    |                  |          | "   |
| Max BHP (psi)               |                        | .052*Set       | tiı | ng Depth*M      | W  | /=               |          |   |
|                             |                        |                |     |                 |    |                  |          | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi)            | Ma                     | ax BHP-(0.12   | 2*  | Setting Dept    | h) | )=               |          | NO NO   |
| MASP (Gas/Mud) (psi)        | Ma                     | ax BHP-(0.22   | 2*  | Setting Deptl   | h) | )=               |          | NO  |
|                             |                        |                |     |                 |    |                  |          | *Can Full Expected Pressure Be Held At Previous Shoe?   |
| Pressure At Previous Shoe   | Max BHP22*(Setting I   | Depth - Previ  | οι  | us Shoe Depti   | h) | )=               |          | NO NO   |
| Required Casing/BOPE To     | est Pressure=          |                |     |                 |    |                  |          | psi   |
| *Max Pressure Allowed @     | Previous Casing Shoe=  |                |     |                 |    |                  |          | psi *Assumes 1psi/ft frac gradient                      |
| Calculations                |                        | String         | _   |                 | _  |                  | _        | "   |
| Max BHP (psi)               | ,                      |                | tii | ng Depth*M      | \X | <i>I</i> =       | _        | -   |
| (psi)                       |                        | .032 301       |     | ing Deptir ivi  | _  | <u> </u>         | _        | BOPE Adequate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi)            | Mz                     | ax BHP-(0.12   | 2*  | Setting Dept    | h) | )=               | <u> </u> | NO NO   |
| MASP (Gas/Mud) (psi)        |                        |                | _   | Setting Depti   | _  | 1.               |          | NO I  |
| (Suorizua) (Por)            | 1410                   | (0.22          | -   | Бери            | )  | <u> </u>         |          | *Can Full Expected Pressure Be Held At Previous Shoe?   |
| Pressure At Previous Shoe   | Max BHP22*(Setting I   | Depth - Previ  | OI: | as Shoe Dent    | h` | )=               | _        | No  |
| Required Casing/BOPE To     | ` •                    |                | _   | -1.             | _  | 1                | =        | psi   |
| *Max Pressure Allowed @     |                        |                | _   |                 | _  | -   -            | =        | psi *Assumes 1psi/ft frac gradient                      |
|                             |                        |                |     |                 |    |                  |          |   |

# 43047512570000 NBU 921-25K4BS



Well name:

43047512570000 NBU 921-25K4BS

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Surface

Project ID: 43-047-51257

Location:

**UINTAH** 

COUNTY

| Design parameters: Collapse Mud weight: Design is based on evacu | 8.330 ppg<br>ated pipe. | Minimum design f<br>Collapse:<br>Design factor | factors:<br>1.125                       | Environment: H2S considered? Surface temperature: Bottom hole temperature Temperature gradient: | 1.40 °F/100ft |
|--|-------------------------|--|---|---|---------------|
|  |                         | Burst:   |   | Minimum section length:   | 100 10        |
|  |                         | Design factor                                  | 1.00                                    | Cement top:   | 1,272 ft      |
| Burst  |                         |  |   |   | ,             |
| Max anticipated surface  |                         |  |   |   |               |
| pressure:  | 2,094 psi               |  |   |   |               |
| Internal gradient:   | 0.120 psi/ft            | <u>Tension:</u>                                |   | Directional Info - Build  | & Drop        |
| Calculated BHP   | 2,371 psi               | 8 Round STC:                                   | 1.80 (J)                                | Kick-off point  | 300 ft        |
|  |                         | 8 Round LTC:                                   | 1.70 (J)                                | Departure at shoe:  | 515 ft        |
| No backup mud specified  |                         | Buttress:                                      | 1.60 (J)                                | Maximum dogleg:   | 2 °/100ft     |
|  |                         | Premium:                                       | 1.50 (J)                                | Inclination at shoe:  | 18.51 °       |
|  |                         | Body yield:                                    | 1.50 (B)                                | Re subsequent strings   | :             |
|  |                         |  | • | Next setting depth:   | 9,632 ft      |
|  |                         | Tension is based on                            | air weight.                             | Next mud weight:  | 12.000 ppg    |
|  |                         | Neutral point:                                 | 2.082 ft                                | Next setting BHP:   | 6,005 psi     |
|  |                         | P - III  | _,                                      | Fracture mud wt:  | 19.250 ppg    |
|  |                         |  |   | Fracture depth:   | 2,380 ft      |
|  |                         |  |   | Injection pressure:   | 2,380 psi     |
|  |                         |  |   | , p   | -,            |

| Run<br>Seq | Segment<br>Length<br>(ft) | Size<br>(in)                  | Nominal<br>Weight<br>(Ibs/ft) | Grade                  | End<br>Finish              | True Vert<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Drift<br>Diameter<br>(in)     | Est.<br>Cost<br>(\$)        |
|------------|---------------------------|-------------------------------|-------------------------------|------------------------|----------------------------|----------------------------|---------------------------|-------------------------------|-----------------------------|
| 1          | 2380                      | 8.625                         | 28.00                         | I-55                   | LT&C                       | 2304                       | 2380                      | 7.892                         | 94248                       |
| Run<br>Seq | Collapse<br>Load<br>(psi) | Collapse<br>Strength<br>(psi) | Collapse<br>Design<br>Factor  | Burst<br>Load<br>(psi) | Burst<br>Strength<br>(psi) | Burst<br>Design<br>Factor  | Tension<br>Load<br>(kips) | Tension<br>Strength<br>(kips) | Tension<br>Design<br>Factor |
| 1          | 997                       | 1880                          | 1.885                         | 2371                   | 3390                       | 1.43                       | 64.5                      | 348                           | 5.39 J                      |

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining

Phone: 801 538-5357

Date: October 7,2010

FAX: 801-359-3940

Salt Lake City, Utah

Collapse is based on a vertical depth of 2304 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name: 43047512570000 NBU 921-25K4BS

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type: Production Project ID:

Location: UINTAH COUNTY

43-047-51257

Design parameters: Minimum design factors: **Environment:** Collapse Collapse: H2S considered? No 74 °F Mud weight: 12.000 ppg Design factor 1.125 Surface temperature: Bottom hole temperature: 209 °F Internal fluid density: 1.000 ppg Temperature gradient: 1.40 °F/100ft Minimum section length: 100 ft

Burst:

Design factor 1.00 Cement top: 2,042 ft

<u>Burst</u>

Max anticipated surface

pressure: 3,886 psi Internal gradient: 0.220 psi/ft Calculated BHP 6,005 psi

No backup mud specified.

 Tension:

 8 Round STC:
 1.80 (J)

 8 Round LTC:
 1.80 (J)

 Buttress:
 1.60 (J)

Premium: 1.50 (J) Body yield: 1.60 (B)

Tension is based on air weight.

Neutral point: 8,011 ft

Directional Info - Build & Drop
Kick-off point 300 ft
Departure at shoe: 761 ft
Maximum dogleg: 2 °/100ft

Inclination at shoe: 0 °

| Run<br>Seq | Segment<br>Length<br>(ft) | Size<br>(in)                  | Nominal<br>Weight<br>(Ibs/ft) | Grade                  | End<br>Finish              | True Vert<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Drift<br>Diameter<br>(in)     | Est.<br>Cost<br>(\$)        |
|------------|---------------------------|-------------------------------|-------------------------------|------------------------|----------------------------|----------------------------|---------------------------|-------------------------------|-----------------------------|
| 1          | 9739                      | 4.5                           | 11.60                         | I-80                   | LT&C                       | 9632                       | 9739                      | 3.875                         | 128555                      |
| Run<br>Seq | Collapse<br>Load<br>(psi) | Collapse<br>Strength<br>(psi) | Collapse<br>Design<br>Factor  | Burst<br>Load<br>(psi) | Burst<br>Strength<br>(psi) | Burst<br>Design<br>Factor  | Tension<br>Load<br>(kips) | Tension<br>Strength<br>(kips) | Tension<br>Design<br>Factor |
| 1          | 5504                      | 6360                          | 1.155                         | 6005                   | 7780                       | 1.30                       | 111.7                     | 212                           | 1.90 J                      |

Prepared Helen Sadik-Macdonald by: Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940 Date: October 7,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9632 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# ON-SITE PREDRILL EVALUATION

# Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name NBU 921-25K4BS

API Number 43047512570000 APD No 2942 Field/Unit NATURAL BUTTES

Location: 1/4,1/4 NESW Sec 25 Tw 9.0S Rng 21.0E 1838 FSL 1400 FWL

GPS Coord (UTM) 628712 4429149 Surface Owner

#### **Participants**

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Roger Perry, Laura Gianokas, Lovel Young, Grizz Oleen, (Kerr McGee), Mitch.Batty, John Slaugh, (Timberline Engineering and Land Surveying), Ed Bonner (SITLA), Ben Williams (UDWR).

#### Regional/Local Setting & Topography

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Approximately 450 feet of new construction will be needed. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 921-25K pad will be a new location oriented in a north-southerly direction on a side-hill which ends beyond the west side of the reserve pit area. It would be desirable to reduce the amount of cut for the reserve pit into this hill. The width of the reserve pit will be reduced 20 feet if the drilling schedule permits the use of the Ensign rig to drill these wells. Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad. The surface, in much of the pit area, is exposed sandstone or bedrock. Rocky outcrops occur throughout the general area. A swale or draw to the north has been avoided. The pad extends to the east and approaches the main north-south road in the area. Four gas wells will be directionally drilled from this pad. They are the NBU 921-25L2AS, 921-25K4BS, 921-25L4AS and 921-25N2BS. The White River is approximately 3 miles down drainage. The selected site appears to be suitable for constructing a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA.

#### Surface Use Plan

**Current Surface Use** 

Grazing Wildlfe Habitat Existing Well Pad

New Road Miles Well Pad Src Const Material Surface Formation

0 Width 352 Length 455 Onsite UNTA

**Ancillary Facilities** N

#### **Waste Management Plan Adequate?**

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#### **Environmental Parameters**

#### Affected Floodplains and/or Wetlands N

#### Flora / Fauna

Vegetation is a desert shrub type, which includes shadscale, curly mesquite, broom snakeweed, herbaceous sage, globemallow, greasewood and halogeton..

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

#### **Soil Type and Characteristics**

Surface soils are a shallow rocky sandy loam.

#### **Erosion Issues** N

#### **Sedimentation Issues** Y

Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad.

#### Site Stability Issues N

#### **Drainage Diverson Required?** Y

Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad.

#### Berm Required? N

#### **Erosion Sedimentation Control Required?** Y

Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad.

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources? N

#### **Reserve Pit**

| Site-Specific Factors                   | Site R           | anking |                     |
|---|------------------|--------|---------------------|
| Distance to Groundwater (feet)          | 100 to 200       | 5      |                     |
| Distance to Surface Water (feet)        | >1000            | 0      |                     |
| Dist. Nearest Municipal Well (ft)       | >5280            | 0      |                     |
| <b>Distance to Other Wells (feet)</b>   |                  | 20     |                     |
| Native Soil Type                        | Mod permeability | 10     |                     |
| Fluid Type                              | Fresh Water      | 5      |                     |
| Drill Cuttings                          | Normal Rock      | 0      |                     |
| <b>Annual Precipitation (inches)</b>    |                  | 0      |                     |
| <b>Affected Populations</b>             |                  |        |                     |
| <b>Presence Nearby Utility Conduits</b> | Not Present      | 0      |                     |
|   | Final Score      | 40     | 1 Sensitivity Level |

#### **Characteristics / Requirements**

The proposed reserve pit is 104' x 260' x 12' deep located in a cut on the southwest side of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

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# Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

# **Other Observations / Comments**

Floyd Bartlett 8/26/2010 **Evaluator Date / Time** 

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10/13/2010

# **Application for Permit to Drill Statement of Basis**

**Utah Division of Oil, Gas and Mining** 

Page 1

| APD No    | API WellNo             | Status          | Well Type                | <b>Surf Owner</b> | <b>CBM</b> |
|-----------|------------------------|-----------------|--------------------------|-------------------|------------|
| 2942      | 43047512570000         | LOCKED          | GW                       | S                 | No         |
| Operator  | KERR-MCGEE OIL & GAS O | NSHORE, L.P.    | <b>Surface Owner-APD</b> |                   |            |
| Well Name | NBU 921-25K4BS         |                 | Unit                     | NATURAL E         | BUTTES     |
| Field     | NATURAL BUTTES         |                 | Type of Work             | DRILL             |            |
| Location  | NESW 25 9S 21E S 18    | 338 FSL 1400 FW | L GPS Coord (UTM)        | 627718E 44        | 29153N     |

#### **Geologic Statement of Basis**

Kerr McGee proposes to set 2,380' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,100'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 25. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill 9/29/2010 **APD Evaluator Date / Time** 

#### **Surface Statement of Basis**

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.3 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Approximately 450 feet of new construction will be needed. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 921-25K pad will be a new location oriented in a north-southerly direction on a side-hill which ends beyond the west side of the reserve pit area. It would be desirable to reduce the amount of cut for the reserve pit into this hill. The width of the reserve pit will be reduced 20 feet if the drilling schedule permits the use of the Ensign rig to drill these wells. Excess spoils stockpiled on the outside of the location in the pit area will keep any overland flows off the location. When the pit is closed, a diversion could be constructed on the side-slope above and next to the pad. The surface, in much of the pit area, is exposed sandstone or bedrock. Rocky outcrops occur throughout the general area. A swale or draw to the north has been avoided. The pad extends to the east and approaches the main north-south road in the area. Four gas wells will be directionally drilled from this pad. They are the NBU 921-25L2AS, 921-25K4BS, 921-25L4AS and 921-25N2BS. The White River is approximately 3 miles down drainage. The selected site appears to be suitable for constructing a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site investigation. Mr. Bonner had no concerns pertaining to this location. SITLA will provide site reclamation standards and a seed mix.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

10/13/2010

# **Application for Permit to Drill Statement of Basis**

Utah Division of Oil, Gas and Mining

Page 2

Floyd Bartlett
Onsite Evaluator

8/26/2010 **Date / Time** 

#### **Conditions of Approval / Application for Permit to Drill**

**Category** Condition

Pits A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and

maintained in the reserve pit.

Surface Drainages adjacent to the proposed pad shall be diverted around the location. Surface The reserve pit shall be fenced upon completion of drilling operations.

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 8/13/2010 **API NO. ASSIGNED:** 43047512570000

WELL NAME: NBU 921-25K4BS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

PROPOSED LOCATION: NESW 25 090S 210E **Permit Tech Review:** 

> **SURFACE: 1838 FSL 1400 FWL Engineering Review:**

> **BOTTOM:** 1848 FSL 2161 FWL Geology Review:

**COUNTY: UINTAH** 

**LATITUDE:** 40.00481 **LONGITUDE:** -109.50373 **UTM SURF EASTINGS: 627718.00** NORTHINGS: 4429153.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE LEASE NUMBER: UO 1194 ST

SURFACE OWNER: 3 - State **COALBED METHANE: NO** 

#### **RECEIVED AND/OR REVIEWED: LOCATION AND SITING:**

✓ PLAT R649-2-3.

**Unit: NATURAL BUTTES** Bond: STATE/FEE - 22013542

**Potash** R649-3-2. General

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 Drilling Unit

Board Cause No: Cause 173-14 Water Permit: Permit #43-8496

**Effective Date:** 12/2/1999 **RDCC Review:** 

Siting: Suspends General Siting **Fee Surface Agreement** 

R649-3-11. Directional Drill ✓ Intent to Commingle

**Commingling Approved** 

Oil Shale 190-5

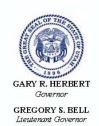
Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 5 - Statement of Basis - bhill

15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - hmacdonald

API Well No: 43047512570000



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

## **Permit To Drill**

\*\*\*\*\*

Well Name: NBU 921-25K4BS API Well Number: 43047512570000 Lease Number: UO 1194 ST

**Surface Owner:** STATE **Approval Date:** 10/13/2010

#### **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Commingle:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

API Well No: 43047512570000

#### **Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well contact Carol Daniels OR
- submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

#### **Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

#### **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

**Approved By:** 

For John Rogers Associate Director, Oil & Gas

SUBMIT AS EMAIL

**Print Form** 

# BLM - Vernal Field Office - Notification Form

| Ope                | rator <u>KERR-McGEE OIL &amp; GA</u>  | <u>AS</u> Rig Name | e/# <u>BUC</u> | CKET RIG                     |             |
|--------------------|---|--------------------|----------------|------------------------------|-------------|
| Subr               | nitted By ANDY LYTLE  | Phone Nur          | nber 720       | 0.929.6100                   |             |
|                    | Name/Number NBU 921-25k   |                    |                |                              | _           |
|                    | Qtr NESW Section 25   |                    | )S             | Range 21F                    | _           |
|                    | se Serial Number <u>UO 1194 ST</u>  | •                  |                | ·90 <u></u>                  | _           |
|                    | Number <u>4304751257</u>  |                    |                |                              | _           |
|                    | 100 17 0 1201   |                    |                |                              |             |
| =                  | <u>d Notice</u> – Spud is the initial pelow a casing string.                                    | l spudding o       | of the w       | ell, not drillin             | g           |
|                    | Date/Time <u>12/16/2010</u>   | 14:00 HRS          | АМ 🗌           | РМ                           |             |
| Casii<br>time<br>✓ | ng – Please report time casis. Surface Casing Intermediate Casing Production Casing Liner Other | ing run starl      | ts, not o      | cementing<br>RECE<br>DEC 1 E | <b>2010</b> |
|                    | Date/Time <u>02/21/2011</u>   | 08:00 HRS          | AM 🗌           | PM 🗌                         |             |
| BOP<br>—           | Initial BOPE test at surface BOPE test at intermediate 30 day BOPE test Other                   | casing point       |                | DM 🗔                         |             |
|                    | Date/Time   |                    | AM             | PM 🔛                         |             |
| Rem                | arks estimated date and time. PLEA  | ASE CONTACT KENN   | Y GATHINGS     | AT                           |             |
| 425 02             | O DOOK OF LOVEL VOING AR ARE TO 1 TO  | <del></del>        |                |                              |             |

|   | STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES   |                                | FORM 9   |  |  |  |  |  |
|---|---|--------------------------------|--|--|--|--|--|--|
|   | DIVISION OF OIL, GAS, AND MINING  | 3                              | <b>5.LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 1194 ST |  |  |  |  |  |
|   | RY NOTICES AND REPORTS ON   | _                              | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:                    |  |  |  |  |  |
|   | sals to drill new wells, significantly deepen exist<br>ugged wells, or to drill horizontal laterals. Use Al |                                | 7.UNIT or CA AGREEMENT NAME:<br>NATURAL BUTTES           |  |  |  |  |  |
| 1. TYPE OF WELL<br>Gas Well   |   |                                | 8. WELL NAME and NUMBER:<br>NBU 921-25K4BS               |  |  |  |  |  |
| 2. NAME OF OPERATOR:<br>KERR-MCGEE OIL & GAS ONS  | HORE, L.P.  |                                | <b>9. API NUMBER:</b> 43047512570000                     |  |  |  |  |  |
| <b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S  | PHONE NO<br>treet, Suite 600, Denver, CO, 80217 3779  | UMBER: 720 929-6007 Ext        | 9. FIELD and POOL or WILDCAT:<br>NATURAL BUTTES          |  |  |  |  |  |
| 4. LOCATION OF WELL<br>FOOTAGES AT SURFACE:<br>1838 FSL 1400 FWL  |   |                                | COUNTY:<br>UINTAH  |  |  |  |  |  |
| QTR/QTR, SECTION, TOWNSH  | IP, RANGE, MERIDIAN:<br>Township: 09.0S Range: 21.0E Meridian: S  |                                | STATE:<br>UTAH   |  |  |  |  |  |
| 11. CHE   | CK APPROPRIATE BOXES TO INDICATE NA   | ATURE OF NOTICE, REPORT,       | OR OTHER DATA  |  |  |  |  |  |
| TYPE OF SUBMISSION  |   | TYPE OF ACTION                 |  |  |  |  |  |  |
|   | ☐ ACIDIZE ☐ /   | ALTER CASING                   | ☐ CASING REPAIR  |  |  |  |  |  |
| NOTICE OF INTENT Approximate date work will start:  | ☐ CHANGE TO PREVIOUS PLANS  | CHANGE TUBING                  | ☐ CHANGE WELL NAME                                       |  |  |  |  |  |
| 12/20/2010  | ☐ CHANGE WELL STATUS ☐ (  | COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE                                      |  |  |  |  |  |
| SUBSEQUENT REPORT   | ☐ DEEPEN ☐ I  | FRACTURE TREAT                 | ☐ NEW CONSTRUCTION                                       |  |  |  |  |  |
| Date of Work Completion:  | ☐ OPERATOR CHANGE ☐ I   | PLUG AND ABANDON               | ☐ PLUG BACK  |  |  |  |  |  |
|   | ☐ PRODUCTION START OR RESUME ☐ I  | RECLAMATION OF WELL SITE       | RECOMPLETE DIFFERENT FORMATION                           |  |  |  |  |  |
| SPUD REPORT Date of Spud:   | ☐ REPERFORATE CURRENT FORMATION ☐ 5   | SIDETRACK TO REPAIR WELL       | ☐ TEMPORARY ABANDON                                      |  |  |  |  |  |
|   | ☐ TUBING REPAIR ☐ \   | VENT OR FLARE                  | WATER DISPOSAL   |  |  |  |  |  |
| DRILLING REPORT Report Date:  | ☐ WATER SHUTOFF ☐ 9   | SI TA STATUS EXTENSION         | APD EXTENSION  |  |  |  |  |  |
| neport Pater  | ☐ WILDCAT WELL DETERMINATION ✓ (  | OTHER                          | OTHER: ACTS (Pit Refurb)                                 |  |  |  |  |  |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. There will be 2-500 bbl temporary frac tanks placed on the location. The trucks will unload water introduction these tanks before the water is placed into the refurbed pit. The purpose of the frac tanks is to collect any hydro-carbons that may have been associated; with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. |   |                                |  |  |  |  |  |  |
| NAME (PLEASE PRINT) Danielle Piernot  | <b>PHONE NUMBER</b> 720 929-6156  | TITLE<br>Regulatory Analyst    |  |  |  |  |  |  |
| SIGNATURE   | , 20 323 0430   | DATE                           |  |  |  |  |  |  |
| N/A   |   | 12/20/2010                     |  |  |  |  |  |  |



# The Utah Division of Oil, Gas, and Mining

- State of UtahDepartment of Natural Resources

**Electronic Permitting System - Sundry Notices** 

# **Sundry Conditions of Approval Well Number 43047512570000**

A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.

> Approved by the **Utah Division of** Oil, Gas and Mining

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

#### **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

zip 80217 state CO

Phone Number: (720) 929-6100

#### Well 1

| Weil I                   | Name                                   | QQ Sec Twp    |  | Rng County   |  |  |
|--------------------------|--|---------------|--|--|--|--|
| NBU 921-25               | N2BS                                   | NESW          | 25   | 98   | 21E  | UINTAH   |
| Current Entity<br>Number | New Entity<br>Number                   | Spud Date     |  | Entity Assignment<br>Effective Date                              |  |  |
| 99999                    | 3900                                   | 1:            | 2/17/20  | 10   | 121  | 39/10  |
|                          | NBU 921-25<br>Current Entity<br>Number | Number Number | NBU 921-25N2BS NESW  Current Entity New Entity S Number Number | NBU 921-25N2BS NESW 25  Current Entity New Entity Number Spud Da | NBU 921-25N2BS NESW 25 9S  Current Entity New Entity Number Spud Date  Number Number | NBU 921-25N2BS NESW 25 9S 21E  Current Entity Number Number Spud Date Entity Eff |

SPUD WELL LOCATION ON 12/17/2010 AT 08:30 HRS.

BHL= SESW

#### Well 2

| API Number  | Well                     | Name                 | QQ         Sec         Twp           NESW         25         9S |           | Rng County |                                     |  |
|-------------|--------------------------|----------------------|---|-----------|------------|-------------------------------------|--|
| 4304751259  | NBU 921-25               | L4AS                 |   |           | 21E        | 21E UINTAH                          |  |
| Action Code | Current Entity<br>Number | New Entity<br>Number | S   | Spud Date |            | Entity Assignment<br>Effective Date |  |
| B           | 99999                    | 3900                 | 12/17/2010  |           | 12         | 129/10                              |  |

Comments: MIRU PETE MARTIN BUCKET RIG.  $\omega$ 5791  $V\Delta$ SPUD WELL LOCATION ON 12/17/2010 AT 12:30 HRS.

BAL= NWSW

#### Well 3

| API Number  | Well                     | Name                 | QQ Sec Twp |            |    | Rng County                          |        |  |
|-------------|--------------------------|----------------------|------------|------------|----|-------------------------------------|--------|--|
| 4304751257  | NBU 921-25               | NBU 921-25K4BS       |            | 25         | 98 | 21E                                 | UINTAH |  |
| Action Code | Current Entity<br>Number | New Entity<br>Number | s          | Spud Date  |    | Entity Assignment<br>Effective Date |        |  |
| B           | 99999                    | 2910                 | 1          | 12/17/2010 |    | 12/39/10                            |        |  |

Comments:

MIRU PETE MARTIN BUCKET RIG. WSmVbSPUD WELL LOCATION ON 12/17/2010 AT 12:30 HRS.

BHL= NESW

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

RECEIVED DEC 2 1 2010

| Gina | Becker |
|------|--------|
|------|--------|

Name (Please Print)

Signature

Title

REGULATORY ANALYST

12/20/2010

Date

(5/2000)

| STATE OF UTAH  |  |  | FORM 9   |  |  |
|--|--|--|--|--|--|
| DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING   |  |  | 5.LEASE DESIGNATION AND SERIAL NUMBER:<br>UO 1194 ST |  |  |
| SUNDRY NOTICES AND REPORTS ON WELLS  |  |  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:                |  |  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. |  |  | 7.UNIT or CA AGREEMENT NAME:<br>NATURAL BUTTES       |  |  |
| 1. TYPE OF WELL Gas Well   |  |  | 8. WELL NAME and NUMBER:<br>NBU 921-25K4BS           |  |  |
| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.  |  |  | <b>9. API NUMBER:</b> 43047512570000                 |  |  |
| <b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  720 929-6515 Ext   |  |  | 9. FIELD and POOL or WILDCAT:<br>NATURAL BUTTES      |  |  |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1838 FSL 1400 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S   |  |  | COUNTY:<br>UINTAH                                    |  |  |
|  |  |  | STATE:<br>UTAH                                       |  |  |
| 11.  CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA   |  |  |  |  |  |
| TYPE OF SUBMISSION   | TYPE OF ACTION   |  |  |  |  |
| MIRU CAPSTAR AIR F<br>HOLE TO 2655'. RAN<br>WATER. LEAD CEM<br>TAILED CEMENT W/<br>PLUG AND DISPLACE<br>PLUG @ 500 PSI - FI<br>1" TOP OUT W/ 2   | CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF | DRILLED 11" SURFACE  DRILLED 1 | Cocepted by the Utah Division of Cocoping Mining     |  |  |
|  |  |  |  |  |  |
| NAME (PLEASE PRINT)<br>Andy Lytle  | <b>PHONE NUMBER</b> 720 929-6100   | TITLE<br>Regulatory Analyst  |  |  |  |
| SIGNATURE<br>N/A   |  | <b>DATE</b> 1/31/2011  |  |  |  |

Sundry Number: 13452 API Well Number: 43047512570000

API Well No: 43047512570000

|  |                                   |  | FORM  |  |  |
|--|-----------------------------------|--|---|--|--|
| STATE OF UTAH  |                                   |  | FORM 9  |  |  |
| DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING   |                                   | 5.LEASE DESIGNATION AND SERIAL NUMBER:<br>UO 1194 ST |   |  |  |
| SUNDRY NOTICES AND REPORTS ON WELLS  |                                   |  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:           |  |  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.   |                                   |  | 7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES     |  |  |
| 1. TYPE OF WELL Gas Well   |                                   |  | 8. WELL NAME and NUMBER:<br>NBU 921-25K4BS      |  |  |
| 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.  |                                   |  | 9. API NUMBER:<br>43047512570000                |  |  |
| <b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 720 929-6515 Ext  |                                   |  | 9. FIELD and POOL or WILDCAT:<br>NATURAL BUTTES |  |  |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1838 FSL 1400 FWL   |                                   |  | COUNTY:<br>UINTAH                               |  |  |
| QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S  |                                   |  | STATE:<br>UTAH                                  |  |  |
| 11. CHE  | CK APPROPRIATE BOXES TO INDICATE  | NATURE OF NOTICE, REPORT,                            | OR OTHER DATA                                   |  |  |
| TYPE OF SUBMISSION   | TYPE OF ACTION                    |  |   |  |  |
|  | ACIDIZE                           | ALTER CASING   | CASING REPAIR                                   |  |  |
| NOTICE OF INTENT Approximate date work will start:   | ☐ CHANGE TO PREVIOUS PLANS        | CHANGE TUBING  | CHANGE WELL NAME                                |  |  |
|  | ☐ CHANGE WELL STATUS              | COMMINGLE PRODUCING FORMATIONS                       | CONVERT WELL TYPE                               |  |  |
| SUBSEQUENT REPORT Date of Work Completion:   | DEEPEN                            | FRACTURE TREAT                                       | ☐ NEW CONSTRUCTION                              |  |  |
|  | OPERATOR CHANGE                   | PLUG AND ABANDON                                     | ☐ PLUG BACK                                     |  |  |
| SPUD REPORT Date of Spud:  | ☐ PRODUCTION START OR RESUME      | RECLAMATION OF WELL SITE                             | ☐ RECOMPLETE DIFFERENT FORMATION                |  |  |
| Date of Spau.  | ☐ REPERFORATE CURRENT FORMATION ☐ | SIDETRACK TO REPAIR WELL                             | ☐ TEMPORARY ABANDON                             |  |  |
| ✓ DRILLING REPORT  | U TUBING REPAIR                   | VENT OR FLARE  | ☐ WATER DISPOSAL                                |  |  |
| Report Date:<br>3/8/2011   | ☐ WATER SHUTOFF                   | SI TA STATUS EXTENSION                               | APD EXTENSION                                   |  |  |
| 3/ 3/ 2311   | WILDCAT WELL DETERMINATION        | OTHER  | OTHER:  |  |  |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  FINISHED DRILLING FROM 2655' TO 9660' ON MARCH 6, 2011. RAN 4 ½"  11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 4&cepted by the SX CLASS G PREM LITE II @ 12.5 PPG, 2.17 YD. TAILED CEMENT W/ 1021 S¥tah Division of CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YD. DROP PLUG & DISPLACEDOW, Gas and Mining 149 BBLS WATER PLUS ADDITIVES. PLUG DOWN, LIFT PRESSURE @ 70 RECORD ONLY PSI, BUMP PRESSURE @ 3200 W/ 5 BBL CEMENT RETURN TO PIT 11 RECORD ONLY REAMING LOST TOTAL RETURNS FLOATS HELD W/ 1.5 BBLS H20 RETURNED TO INVENTORY. TOP OF TAIL CEMENT CALC @ 4340'. RD CEMENTERS AND CLEANED PITS. RELEASED H&P RIG #298 ON MARCH 8, 2011 @ 13:00 HRS. |                                   |  |   |  |  |
| NAME (PLEASE PRINT)<br>Andy Lytle  | <b>PHONE NUMBER</b> 720 929-6100  | TITLE<br>Regulatory Analyst                          |   |  |  |
| SIGNATURE<br>N/A   |                                   | <b>DATE</b> 3/9/2011                                 |   |  |  |

Sundry Number: 15035 API Well Number: 43047512570000

|  | STATE OF UTAH  |   | FORM 9  |  |  |  |
|--|--|---|---|--|--|--|
|  | DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING   | :   | 5.LEASE DESIGNATION AND SERIAL NUMBER:<br>UO 1194 ST  |  |  |  |
| SUNDF  | RY NOTICES AND REPORTS ON  | WELLS   | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:   |  |  |  |
|  | sals to drill new wells, significantly deepen existi<br>gged wells, or to drill horizontal laterals. Use AP  | 7.UNIT or CA AGREEMENT NAME:<br>NATURAL BUTTES  |   |  |  |  |
| 1. TYPE OF WELL<br>Gas Well                                      |  | 8. WELL NAME and NUMBER:<br>NBU 921-25K4BS  |   |  |  |  |
| 2. NAME OF OPERATOR:<br>KERR-MCGEE OIL & GAS ONS                 | HORE, L.P.   | <b>9. API NUMBER:</b> 43047512570000  |   |  |  |  |
| <b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S       | PHONE NU<br>treet, Suite 600, Denver, CO, 80217 3779   | 9. FIELD and POOL or WILDCAT:<br>NATURAL BUTTES   |   |  |  |  |
| 4. LOCATION OF WELL<br>FOOTAGES AT SURFACE:<br>1838 FSL 1400 FWL |  |   | COUNTY:<br>UINTAH   |  |  |  |
| QTR/QTR, SECTION, TOWNSHI  | P, RANGE, MERIDIAN:<br>Township: 09.0S Range: 21.0E Meridian: S  |   | STATE:<br>UTAH  |  |  |  |
| 11. CHE  | CK APPROPRIATE BOXES TO INDICATE NA  | TURE OF NOTICE, REPORT,   | OR OTHER DATA   |  |  |  |
| TYPE OF SUBMISSION   |  | TYPE OF ACTION  |   |  |  |  |
| THE SUBJECT WELL   | CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  ✓ PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  C  C  C  C  C  C  C  C  C  C  C  C  C | details including dates, depths, von 05/11/2011 AT 1:00 GUBMITTED WITH THE AUGUST AT 1:00 Oil | CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION WATER DISPOSAL APD EXTENSION OTHER: COlumes, etc.  CCCEPTED by the Utah Division of Gas and Mining RECORD ONLY |  |  |  |
| NAME (PLEASE PRINT)<br>Sheila Wopsock                            | <b>PHONE NUMBER</b> 435 781-7024   | TITLE<br>Regulatory Analyst   |   |  |  |  |
| SIGNATURE<br>N/A   |  | <b>DATE</b> 5/11/2011   |   |  |  |  |

STATE OF UTAH AMENDED REPORT FORM 8 **DEPARTMENT OF NATURAL RESOURCES** (highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: **UO 1194 ST** 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a. TYPE OF WELL: 7. UNIT or CA AGREEMENT NAME OIL GAS WELL OTHER UTU63047A b. TYPE OF WORK: 8. WELL NAME and NUMBER: DIFF. RESVR. NBU 921-25K4BS WELL 🔽 RE-ENTRY OTHER 2. NAME OF OPERATOR: 9. API NUMBER: KERR MCGEE OIL & GAS ONSHORE, L.P. 4304751257 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10 FIELD AND POOL, OR WILDCAT P.O.BOX 173779 STATE CO ZIP 80217 CITY DENVER (720) 929-6100 NATURAL BUTTES BHL reviewed by HSM 4. LOCATION OF WELL (FOOTAGES) 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: AT SURFACE: NESW 1838 FSL 1400 FWL S25, T9S, R21E NESW 25 9S 21E S AT TOP PRODUCING INTERVAL REPORTED BELOW: NESW 1865 FSL 2158 FWL S25, T9S, R21E 12. COUNTY 13. STATE AT TOTAL DEPTH: NESW 1859 FSL 2171 FWL S25, T9S, R21E UTAH UINTAH 14. DATE SPUDDED: 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): ABANDONED READY TO PRODUCE 🗸 12/17/2010 3/6/2011 5/11/2011 4971 GL 19. PLUG BACK T.D.: MD 9,613 18. TOTAL DEPTH: MD 9,660 21. DEPTH BRIDGE 20. IF MULTIPLE COMPLETIONS, HOW MANY? MD TVD 9,570 TVD 9,523 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) NO 🗸 WAS WELL CORED? YES (Submit analysis) **CBL** WAS DST RUN? NO 🗸 YES (Submit report) DIRECTIONAL SURVEY? NO YES 7 (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER **CEMENT TYPE &** SLURRY HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) BOTTOM (MD) CEMENT TOP \*\* AMOUNT PULLED DEPTH NO. OF SACKS VOLUME (BBL) 20" STL 36.7# 40 28 11" 28# 8 5/8" **IJ-55** 2.651 625 0 7/8" 4 1/2" 1-80 11.6# 9.634 1,501 830 25. TUBING RECORD DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) 2 3/8" 9.054 26. PRODUCING INTERVALS 27. PERFORATION RECORD FORMATION NAME TOP (MD) BOTTOM (MD) TOP (TVD) BOTTOM (TVD) INTERVAL (Top/Bot - MD) SIZE NO. HOLES PERFORATION STATUS (A) MESAVERDE 7.532 9,533 7,532 9,533 0.36 192 Open Squeezed Open Squeezed (C) Open Squeezed (D) Squeezed 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. **DEPTH INTERVAL** AMOUNT AND TYPE OF MATERIAL 7532 - 9533 PUMP 7,284 BBLS SLICK H2O & 158,718 LBS SAND DIV. OF OIL, GAS & MINIA 29. ENCLOSED ATTACHMENTS: 30. WELL STATUS: ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT ✓ DIRECTIONAL SURVEY PROD SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION OTHER: CORE ANALYSIS

| DUCTION              |  |  |  | INTI  | RVAL A (As show  | wn in item #26)  |   |   |   |   |
|----------------------|--|--|--|---|--|--|---|---|---|---|
| DUCED:               | 1  |  |  | 4   |  | TEST PRODUCTION RATES: →   | OIL – BBL:  | GAS - MCF:<br>2.426   | WATER -   |   |
| TBG. PRESS.<br>1,821 | CSG. PRE   | SS. API G  | RAVITY   | BTU - GAS   |  | 24 HR PRODUCTION<br>RATES: →   |   | GAS - MCF:<br>2,426   | WATER - 480   | BBL: INTERVAL STATUS                              |
|                      |  |  |  | INT   | RVAL B (As show  | wn in item #26)  |   |   |   |   |
| DUCED:               | TEST DAT   | E:   |  | HOURS TESTED  | ;  | TEST PRODUCTION RATES: →   | OIL - BBL:  | GAS MCF:  | WATER   | BBL: PROD. METHOD:                                |
| TBG. PRESS.          | CSG. PRE   | SS. API GI   | RAVITY   | BTU – GAS   | GAS/OIL RATIO  | 24 HR PRODUCTION RATES: →  | OIL BBL:  | GAS - MCF:  | WATER -   | BBL: INTERVAL STATUS                              |
|                      | .t   |  |  | INTI  | RVAL C (As sho   | wn in item #26)  |   |   |   | - <del></del>                                     |
| DUCED:               | TEST DAT   | E:   |  | HOURS TESTED  | ·  | TEST PRODUCTION RATES: →   | OIL BBL:  | GAS MCF:  | WATER -   | BBL: PROD. METHOD:                                |
| TBG. PRESS.          | CSG. PRE   | SS. API GI   | RAVITY   | BTU GAS   | GAS/OIL RATIO  | 24 HR PRODUCTION<br>RATES: →   | OIL BBL:  | GAS - MCF:  | WATER -   | BBL: INTERVAL STATUS                              |
|                      |  |  | *****  | INT   | RVAL D (As sho   | wn in item #26)  |   |   |   |   |
| DUCED:               | TEST DAT   | E:   |  | HOURS TESTED  | :  | TEST PRODUCTION RATES: →   | OIL - BBL:  | GAS - MCF:  | WATER -   | BBL: PROD. METHOD:                                |
| TBG. PRESS.          | CSG. PRE   | SS. API G  | RAVITY   | BTU GAS   | GAS/OIL RATIO  | 24 HR PRODUCTION<br>RATES: →   | OIL – BBL:  | GAS MCF:  | WATER -   | BBL: INTERVAL STATUS                              |
| OF GAS (Sold,        | Used for Fu  | uel, Vented, E   | c.)  |   |  | *  |   |   |   |   |
| F POROUS ZON         | IES (Include   | Aquifers):   |  |   |  | 34   | 4. FORMATION  | (Log) MARKERS:  | <del></del>   |   |
|                      |  |  |  |   | tests, including de  | epth interval  |   |   |   |   |
| 1                    | Top<br>(MD)  | Bottom<br>(MD)   |  | Descript  | ions, Contents, etc  | <b>&gt;</b> .  |   | Name  |   | Top<br>(Measured Depth)                           |
| ST 1<br>NY 2<br>I 4  | 1,786<br>2,191<br>1,810  | 7,519<br>9.660   | TD   |   |  |  |   | ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;  | REC   | EIVED   |
|                      | ,  | •  |  |   |  |  |   | 9.<br>*   | NUL   | 1 6 2011  |
|                      | :  |  |  |   |  |  |   | DIV   | OF OIL  | GAS & MINING                                      |
|                      | TBG. PRESS.  TBG. PRESS.  TBG. PRESS.  DUCED:  TBG. PRESS.  DUCED:  TBG. PRESS.  DUCED:  TBG. PRESS.  VER 1  ST 1  YER 1 | TEST DATEST DATE | TEST DATE: 5/16/2011 TBG. PRESS. 1,821  CSG. PRESS. 3,019  DUCED: TEST DATE: TBG. PRESS. CSG. PRESS.  API GF  DUCED: TEST DATE: TBG. PRESS. CSG. PRESS. API GF  DUCED: TEST DATE: TBG. PRESS. CSG. PRESS. API GF  DUCED: TEST DATE: TBG. PRESS. CSG. PRESS. API GF  DUCED: TEST DATE: TBG. PRESS. CSG. PRESS. API GF  DUCED: TEST DATE: TBG. PRESS. CSG. PRESS. API GF  DUCED: TEST DATE: TBG. PRESS. TEST DATE: TOP GAS (Sold, Used for Fuel, Vented, Etc. TSG. PRESS. TOP GAS (Sold, Used for Fuel, Vented, Etc. TSG. TOP GAS (MD)  TOP Bottom (MD)  VER 1,490 ST 1,786 IY 2,191 4,810 7,519 | TEST DATE: 5/16/2011 TBG. PRESS. CSG. PRESS. API GRAVITY TBG. PRESS. CSG. PRESS. API GRAVITY TBG. PRESS. CSG. PRESS. API GRAVITY DUCED: TEST DATE: TBG. PRESS. CSG. PRESS. API GRAVITY TOP GAS (Sold, Used for Fuel, Vented, Etc.) TPOROUS ZONES (Include Aquifers): Top (MD) Top (MD)  VER 1,490 ST 1,786 IY 2,191 4,810 7,519 | TEST DATE: 5/16/2011  TBG. PRESS. 1,821  TBG. PRESS. 3,019  INTE DUCED: TEST DATE: HOURS TESTED  INTE DUCED: DESCRIPTION  INTE DUCED: TEST DATE: HOURS TESTED  INTE DUCED: DESCRIPTION  INTE DUCED: DESCRIP | TEST DATE: 5/16/2011 24  TBG. PRESS. 3,019  INTERVAL B (As short DUCED: TEST DATE: HOURS TESTED: TBG. PRESS. CSG. PRESS. API GRAVITY BTU – GAS GAS/OIL RATIO  INTERVAL C (As short DUCED: TEST DATE: HOURS TESTED: INTERVAL C (As short DUCED: TEST DATE: HOURS TESTED: INTERVAL C (As short DUCED: TEST DATE: HOURS TESTED: INTERVAL D (As short DUCED: TEST DATE: TESTED: TESTED: TESTED: TESTED: TESTED: TESTED: | TEST DATE:  5/16/2011  TEST PRODUCTION RATES: →  TEST PRODUCTION RATES: →  TEST PRODUCTION RATES: →  TEST PRODUCTION RATES: →  INTERVAL B (As shown in item #26)  DUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION RATES: →  INTERVAL C (As shown in item #26)  DUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION RATES: →  INTERVAL C (As shown in item #26)  DUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION RATES: →  INTERVAL D (As shown in item #26)  DUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION RATES: →  INTERVAL D (As shown in item #26)  DUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION RATES: →  INTERVAL D (As shown in item #26)  TEST DATE: HOURS TESTED: TEST PRODUCTION RATES: →  INTERVAL D (As shown in item #26)  TEST PRO | DUCED: TEST DATE: 5/16/2011   TEST PRODUCTION OIL - BBL: RATES: → O  TEST PRODUCTION OIL - BBL: RATES: → O  INTERVAL B (As shown in Item #25)  DUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION OIL - BBL: RATES: → O  INTERVAL B (As shown in Item #25)  DUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION OIL - BBL: RATES: → OIL - BB | DUCED:   TEST DATE:   HOURS TESTED:   API GRAVITY   BTU - GAS   GAS/OIL RATIO   24 HR PRODUCTION   OIL - BBL:   GAS - MCF: RATES: → O   O   2,426 | DUCED:   TEST DATE:   HOURS TESTED:   24   RATES: |

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLE

TITLE REGULATORY ANALYST

SIGNATURE \_

DATE 6/7/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

| Well: NBU 92            | 1-25K4BS [YELLO             | W]               | Spud Co  | onductor             | : 12/17/2   | 2010    | Spud Date: 1    | /27/2011  |  |  |
|-------------------------|-----------------------------|------------------|----------|----------------------|-------------|---------|-----------------|---|--|--|
| Project: UTAH           | I-UINTAH                    |                  | Site: NB | U 921-2              | 5K PAD      |         |                 | Rig Name No: H&P 298/298, CAPSTAR 310/310   |  |  |
| Event: DRILLI           | NG                          |                  | Start Da | te: 1/10/            | 2011        |         |                 | End Date: 3/8/2011  |  |  |
| Active Datum:<br>_evel) | RKB @4,997.00ft (           | above Mear       | Sea      | UWI: N               | E/SW/0/     | 9/S/21/ | E/25/0/0/26/PM/ | M/S/1838/W/0/1400/0/0   |  |  |
| Date                    | Time<br>Start-End           | Duration<br>(hr) | Phase    | Code                 | Sub<br>Code | P/U     | MD From (ft)    | Operation   |  |  |
| 1/27/2011               | 16:00 - 17:30               | 1.50             | MIRU     | 01                   | С           | Р       | J               | SKID RIG & RIG UP   |  |  |
|                         | 17:30 - 19:00               | 1.50             | PRPSPD   | 14                   | Α           | P       |                 | WELD ON CONDUCTOR & RU FLOW LINE  |  |  |
|                         | 19:00 - 20:30               | 1.50             | PRPSPD   | 06                   | Α           | P       |                 | PU 11" BIT & 8" MOTOR   |  |  |
|                         | 20:30 - 21:30               | 1.00             | DRLSUR   | 02                   | В           | Р       |                 | SPUD 11" SURFACE HOLE F/40'- 223' // ROP=183<br>FPH // WOB=16/18K // RPM=55/96 // SPP= 850/670<br>// GPM= 600   |  |  |
|                         | 21:30 - 23:00               | 1.50             | DRLSUR   | 06                   | Α           | Р       |                 | TOOH & PU DIR TOOLS   |  |  |
| 1/28/2011               | 23:00 - 0:00<br>0:00 - 6:00 | 1.00<br>6.00     | DRLSUR   | 02                   | D<br>D      | Р       |                 | DI R DRLG 11" SURFACE HOLE F/ 223'-330' // ROP= 107 FPH // WOB=18-22K // RPM= 55/96 // SPP= 880/650 // GPM=600 // LAST SURVEY @ 297'= 3.08 DEG- 84.97 AZ  |  |  |
| 1/28/2011               | 6:00 - 8:00                 | 2.00             | DRLSUR   | 02                   | D           | P<br>P  |                 | DI R DRLG 11" SURFACE HOLE F/ 330'-1085' // ROP= 126 FPH // WOB=18-22K // RPM= 55/96 // SPP= 880/650 // GPM=600 // LAST SURVEY @ 962'=11.88 DEG- 85.04 AZ // NO LOSSES  |  |  |
|                         | ,                           |                  |          |                      |             |         |                 | DI R DRLG 11" SURFACE HOLE F/ 1085'-1278' //<br>ROP= 97 FPH // WOB=18-22K // RPM= 55/96 //<br>SPP= 880/650 // GPM=600   |  |  |
|                         | 8:00 - 9:00                 | 1.00             | DRLSUR   | 07                   | Α           | Р       |                 | SERVICE RIG & EQUIPMENT   |  |  |
|                         | 9:00 - 18:00                | 9.00             | DRLSUR   | 02                   | D           | Р       |                 | DI R DRLG 11" SURFACE HOLE F/ 1278'- 1939' // ROP= 73 FPH // WOB=18-22K // RPM= 55/96 // SPP= 1050/850 // GPM=600   |  |  |
|                         | 18:00 - 0:00                | 6.00             | DRLSUR   | 02                   | D           | Р       |                 | DI R DRLG 11" SURFACE HOLE F/ 1939'-2382' // ROP= 74 FPH // WOB=18-22K // RPM= 55/96 // SPP= 1200/1050 // GPM=600 // 85% RETURNS // LAST SURVEY @2291'=17.56 DEG- 85.16 AZ  |  |  |
| 1/29/2011               | •                           |                  | CSG      |                      |             |         |                 | SPUD DATE/TIME: 1/27/2011 20:30   |  |  |
|                         |                             |                  |          | Strate of the second | REC<br>JUN  |         |                 | SURFACE HOLE: Surface From depth: 40 Surface To depth: 2,655 Total SURFACE hours: 30.00 Surface Casing size: 8 5/8 # of casing joints ran: 59 Casing set MD: 2,633.0  |  |  |
|                         |                             |                  |          | DIV. (               | OF OIL,     | GAS &   | MINING          | # sx of cement: 200/225/200 Cement blend (ppg:) 11.0/15.8/15.8 Cement yield (ft3/sk): 3.83/1.15/1.15 # of bbls to surface: 0 Describe cement issues: NO CMT TO SURFACE  |  |  |
|                         | 0:00 - 5:00                 | 5.00             | DRLSUR   | 02                   | D           | Р       |                 | Describe hole issues: 70% RETURNS F/ 2000' - 2655  DI R DRLG 11" SURFACE HOLE F/ 2382'-2655' // ROP= 61 FPH // WOB=18-22K // RPM= 55/96 // SPP= 1200/1050 // GPM=600 // 75% RETURNS // LAST SURVEY@ 2595'= 16.15 DEG-82.15 AZ // 9' HIGH & 3' FIGHT OF LINE // 92.3% ROTATE- 7.7% SLIDE |  |  |
|                         | 5:00 - 5:30                 | 0.50             | DRLSUR   | 05                   | Α           | Р       |                 | CIRC & COND HOLE FOR 8.625" CSG   |  |  |
|                         | 5:30 - 9:00                 | 3.50             | DRLSUR   | 06                   | Α           | Ρ       |                 | LD DRILL STRING & DIR TOOLS   |  |  |
|                         | 9:00 - 12:30                | 3.50             | CSG      | 12                   | С           | P       |                 | PJSM // RUN 59 JT'S, 8-5/8", 28#, J-55, LT&C CSG<br>SHOE SET @ 2633' // BAFFLE @ 2586'  |  |  |

| Well: NBU 921           | -25K4BS [YELLO                 | <b>/</b> /]      | Spud Co    | onductor  | : 12/17/:   | 2010       | Spud Date: 1/27/2011   |  |  |  |  |
|-------------------------|--------------------------------|------------------|------------|-----------|-------------|------------|--|--|--|--|--|
| Project: UTAH-          | -UINTAH                        |                  | Site: NB   | U 921-2   | 5K PAD      |            | Rig Name No: H&P 298/298, CAPSTAR 310/310  |  |  |  |  |
| Event: DRILLIN          | NG                             |                  | Start Da   | te: 1/10/ | 2011        |            | End Date: 3/8/2011   |  |  |  |  |
| Active Datum:<br>Level) | RKB @4,997.00ft (              | above Mean       | Sea        | UWI: N    | IE/SW/0     | /9/S/21/E/ | 25/0/0/26/PM/S/1838/W/0/1400/0/0   |  |  |  |  |
| Date                    | Time<br>Start-End              | Duration<br>(hr) | Phase      | Code      | Sub<br>Code | P/U        | MD From Operation (ft)   |  |  |  |  |
|                         | 12:30 - 15:00                  | 2.50             | CSG        | 12        | E           | Р          | PJSM // TEST LINES TO 2500 PSI // PUMP 25 BBL SPACER // LEAD= 200 SX CLASS G CMT (YIELD=3.83 CUFT/SK, WT= 11.0 PPG) // TAIL=225 SX CLASS G CMT (YIELD= 1.15 CUFT/SK, WT= 15.8 PPG) // DROP PLUG & DISPLACE W/ 163 BBL'S WATER // PLUG DN @ 14:46 01/29/20011 // NO CMT TO SURFACE // BUMP PLUG @ 500 PSI // FINAL LIFT = 200 PSI // CKECK FLOATS- HELD W5 BBL BACK |  |  |  |  |
|                         | 15:30 - 15:30<br>15:30 - 16:00 | 0.50<br>0.50     | CSG<br>CSG | 14<br>12  | A<br>E      | P<br>P     | CUT OFF CONDUCTOR & HANG 8.625" CSG PUMP 1" TOP OUT W/ 200 SX CLASS G CMT @ 1.15 YIELG & 15.8 WT // NO CMT TO SURFACE // WILL TOP OUT WHEN OUT TO DO NEXT JOB // RELEASE RIG @ 16:00 1/29/2011   |  |  |  |  |
| 2/28/2011               | 18:00 - 19:00                  | 1.00             | MIRU       | 01        | С           | Р          | SKID RIG TO NBU 921-25K4BS   |  |  |  |  |
|                         | 19:00 - 21:00                  | 2.00             | MIRU       | 01        | С           | Р          | CENTER RIG OVER WELL   |  |  |  |  |
|                         | 21:00 - 23:00                  | 2.00             | MIRU       | 14        | Α           | Р          | LOCK DOWN BOP STACK / NIPPLE UP/CHANGE<br>OUT BAILS & ELEVATORS/FINISH RIGGING UP<br>FLOW LINE,MUD LINE  |  |  |  |  |
|                         | 23:00 - 0:00                   | 1.00             | MIRU       | 15        | Α           | Р          | RU & TEST BOPS   |  |  |  |  |

RECEIVED

PRESSURE TEST PIPE RAMS, BLIND RAMS,

CASING 1500 F/ 30 MIN

INSTALL WEAR BUSHING

PRE SPUD INSPECTION

DERRICK FOR LEVEL-OK-

TO 2672'

DRILLED

DRILLED

**RIG SERVICE** 

TRIP IN HOLE TAG CEMENT @ 2517'

FLOOR VALVE, KILL LINES & KILL LINE VALVES, BOP WING VALVES, HCR VALVE + CHOKE LINE; INNER AND OUTER CHOKE VALVES & MANIFOLD TO 250 PSI LOW @ 5 MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2500 PSI HIGH @ 10 MINUTES /

PICK UP M MTR,BIT,DIRECT TOOLS,SCRIBE &

SURFACE TEST/ TRIP IN HOLE W/ HWDP/ CHECK

DRILL FLOAT TRAC SHOE @ 2643 OPEN HOLE

DRILL/ ROT / SLIDE F/ 2672-3750=1078'=154 FPH / WOB 15K-18K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 1720/1400 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 120/94/108 / TORQUE ON/OFF BOTTOM 6K/3K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER./ SLIDE 56' IN .50 MIN = 12% OF FOOTAGE DRILLED & 5% OF HRS

DRILL/ ROT / SLIDE F/ 3750-5075=1325'=155.8 FPH

/ WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 1800/1550 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 127/107/115/ TORQUE ON/OFF BOTTOM 8K/3K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER./ SLIDE 46' IN .48 MIN = 3.5% OF FOOTAGE DRILLED &9.4% OF HRS

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3/1/2011

3.50

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1.50

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15:30 - 0:00

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6:00

7:00

# **Operation Summary Report**

|               | 1-25K4BS [YELLOV           | V]               | <del> </del> |         | r: 12/17/2  | 010     | Spud Date: 1/27/2011  |
|---------------|----------------------------|------------------|--------------|---------|-------------|---------|---|
| Project: UTAH | I-UINTAH                   |                  | Site: NB     | U 921-2 | 25K PAD     |         | Rig Name No: H&P 298/298, CAPSTAR 310/310   |
| Event: DRILLI | NG                         |                  | Start Da     | .,      |             |         | End Date: 3/8/2011  |
| Level)        | RKB @4,997.00ft (a         | above Mea        | n Sea        | UWI: N  | NE/SW/0/    | 9/S/21/ | /E/25/0/0/26/PM/S/1838/W/0/1400/0/0   |
| Date          | Time<br>Start-End          | Duration<br>(hr) | Phase        | Code    | Sub<br>Code | P/U     | MD From Operation (ft)  |
| 3/2/2011      | 0:00 - 6:00<br>6:00 - 7:30 | 1.50             | DRLPRO       | 02      | D<br>D      | P       | DRILL/ ROT / SLIDE F/ 5075-5775=700=116.6 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1700 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 146/112/133/ TORQUE ON/OFF BOTTOM 9K/5K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER J/ SLIDE 5' IN .7 MIN = .07% OF FOOTAGE DRILLED &1.9% OF HRS DRILLED DRILL/ ROT / SLIDE F/ 5,775'-5,928'=153'=102 FPH |
|               |                            |                  |              |         |             |         | / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1700 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 158/120/135/ TORQUE ON/OFF BOTTOM 9K/5K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER./ SLIDE 0' IN 0 MIN = 0% OF FOOTAGE DRILLED & 0% OF HRS DRILLED   |
|               | 7:30 - 11:30               | 4.00             | DRLPRO       | 22      | G           | Х       | LOST TOTAL RETURNS @ 5,928'/ ATTEMPT TO REGAIN CIRC / PULL 5 STDS / MIX & PUMP LCM REGAIN CIRC / TIH / 500 BBL LOSS   |
|               | 11:30 - 15:30              | 4.00             | DRLPRO       | 02      | D           | Р       | DRILL/ ROT / SLIDE F/ 5,928'-6,127'=199'=50' FPH / WOB 18K-20K / TOP DRIVE RPM 35-50 / PUMP 80/90 SPM = 360/405 GPM / PUMP PRESSURE ON/OFF BOTTOM 1800/1600 PSI / MUD MOTOR RPM 85 / PU/SO/ROT WT 165/132/140 / TORQUE ON/OFF BOTTOM 9K/5K HOLE STILL SEEPING BEGIN MUD UP & RAISE LCM CONTENT TO 20 % LOSS 75 BBL  |
|               | 15:30 - 17:00              | 1.50             | DRLPRO       | 06      | G           | Z       | LOOSING PUMP PRESSURE / CHECK SURFACE<br>EQUIPMENT / TOOH F/ 6,127' TO 5,320' / L/D<br>WASHED OUT JT ( 9 STDS & DOUBLE/ 807' FROM<br>RKB OR 5,320' FROM BIT) WASHED IN SLIP AREA  |
|               | 17:00 - 0:00               | 7.00             | DRLPRO       | 02      | D           | P       | DRILL/ ROT / SLIDE F/ 6,127' TO 6,565' 438'=62.57 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1700 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 165/132/139/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 16' IN 20 MIN =3% OF FOOTAGE DRILLED & 3 % OF HRS DRILLED / 9.4 MUD WT 35 VIS / 20% LCM / NO MUD LOSS / BOP DRILL                                       |
| 3/3/2011      | 0:00 - 12:30               | 12.50            | DRLPRO       | 02      | D           | P       | DRILL/ ROT / SLIDE F/ 6,565' TO 7,078' = 513'= 41.04 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2050/1750 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 165/136/152/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 22' IN 80 MIN =4% OF FOOTAGE DRILLED & 10 % OF HRS DRILLED / 9.9 MUD WT 45 VIS / 18% LCM / NO MUD LOSS   |
|               | 12:30 - 15:00              | 2.50             | DRLPRO       | 22      | G           | Х       | LOOSING RETURNS BUILD VOLUME & RAISE<br>LCM CONTENT 300 BBL MUD LOSE  |
|               | 15:00 - 0:00               | 9.00             | DRLPRO       | 02      | D           | P       | DRILL/ ROT / SLIDE F/ 7,078' TO 7,349' 271'= 30.11 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2075/1750 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 175/140/155/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 23' IN 110 MIN =8% OF FOOTAGE DRILLED & 6 % OF HRS DRILLED / 10.4 MUD WT 46 VIS / 22% LCM / NO MUD LOSS  |

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# **Operation Summary Report**

 Well: NBU 921-25K4BS [YELLOW]
 Spud Conductor: 12/17/2010
 Spud Date: 1/27/2011

 Project: UTAH-UINTAH
 Site: NBU 921-25K PAD
 Rig Name No: H&P 298/298, CAPSTAR 310/310

 Event: DRILLING
 Start Date: 1/10/2011
 End Date: 3/8/2011

Active Datum: RKB @4,997.00ft (above Mean Sea

UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0

| evel)    |       | ·               |                  |        |      |             |     |                 |  |
|----------|-------|-----------------|------------------|--------|------|-------------|-----|-----------------|--|
| Date     |       | Time<br>art-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(ft) | Operation  |
| 3/4/2011 |       | - 15:30         | 15.50            | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 7,349' TO 7,828' =479'= 30.90 FPH / WOB 18K-20K / TOP DRIVE RPM 35-6 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2075/1800 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 190/145/162/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 20' IN 90 MIN = 4% OF FOOTAGE DRILLED & 9 % OF HRS DRILLED / 10.6 MUD WT 46 VIS / 22% LCM / NO MUD LOSS |
|          |       | - 16:00         | 0.50             | DRLPRO | 07   | Α           | Р   |                 | SERVICE RIG @ 7,828'   |
|          |       | - 16:30         | 0.50             | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 7,828' TO 7,850' =22'= 44' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2075/1800 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 190/145/162/ TORQUE ON/OFF BOTTOM 8K/5K/ BOP DRILL  |
|          | 16:30 | - 17:30         | 1.00             | DRLPRO | 05   | С           | Р   |                 | CIRC BTMS UP @ 7,850'  |
|          | 17:30 | - 21:00         | 3.50             | DRLPRO | 06   | Α           | Р   |                 | TOOH F/ BIT & MTR F/ 7,850' TO BIT W/ NO<br>PROBLEMS / CHECK LEVEL ON DRK & IF PIPE IS<br>CENTER OF HOLE-OK / FUNCTION BOP'S   |
|          | 21:00 | - 21:30         | 0.50             | DRLPRO | 06   | Α           | P   |                 | MU BIT & MTR ORIENTATE & SCRIBE SAME   |
|          | 21:30 | - 0:00          | 2.50             | DRLPRO | 06   | Α           | Р   |                 | TIH W/ BIT & BHA # 2 TO 5,100' FILL @ SHOE & 5,000' W/ NO PROBLEMS   |
| 3/5/2011 |       | - 1:00          | 1.00             | DRLPRO | 06   | Α           | P   |                 | TIH F/ 5,100' TO 7,700' WASH TO BTM @ 7,850' W<br>NO PROBLEMS  |
|          | 1:00  | - 13:00         | 12.00            | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 7,850' TO 8,430' =580'= 48.33' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2320/2150 PSI / MUD MOTOR RPM 79/ PU/SO/ROT WT 195/145/165/ TORQUE ON/OFF BOTTOM 8K/5K/ MUD WT 11.4 / VIS 46 / LCM 22% NO MUD LOSE   |
|          |       | - 15:30         | 2.50             | DRLPRO | 22   | G           | Р   |                 | LOST TOTAL RETURNS /REGAIN PARTIAL<br>RETURNS BUILD VOLUME & RAISE LCM<br>CONTENT TO 30% / 350 BBL LOSE  |
|          |       | - 17:00         | 1.50             | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 8,430' TO 8,493' =63'= 42' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1975 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 195/145/165/ TORQUE ON/OFF BOTTOM 8K/9K/ MUD WT 11.5 / VIS 46 / LCM 30%  |
|          |       | - 17:30         | 0.50             | DRLPRO | 07   | Α           | P   |                 | SERVICE RIG @ 8,493' / BOP DRILL   |
|          | 17:30 | - 0:00          | 6.50             | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 8,493' TO 8,778' =285'= 43.85' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1975 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 197/145/170/ TORQUE ON/OFF BOTTOM 8K/9K/   |

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MUD LOSE 110 BBL

MUD WT 11.8 / VIS 48 / LCM 30% / MUD LOSE 110

DRILL/ ROT F/8,778' TO 8,961' =183'= 43.85' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1975 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 197/145/170/ TORQUE ON/OFF BOTTOM 8K/9K/ MUD WT 11.8 / VIS 48 / LCM 30% /

JUN 16 2011

3/6/2011

0:00 - 6:00

6.00

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# **Operation Summary Report**

 Well: NBU 921-25K4BS [YELLOW]
 Spud Conductor: 12/17/2010
 Spud Date: 1/27/2011

 Project: UTAH-UINTAH
 Site: NBU 921-25K PAD
 Rig Name No: H&P 298/298, CAPSTAR 310/310

 Event: DRILLING
 Start Date: 1/10/2011
 End Date: 3/8/2011

Active Datum: RKB @4,997.00ft (above Mean Sea

UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0

| evel)  Date Time Duration Phase |       |                    |                  |                  |          |             |        |  |
|---------------------------------|-------|--------------------|------------------|------------------|----------|-------------|--------|--|
| Date                            | 1     | Time<br>art-End    | Duration<br>(hr) | Phase            | Code     | Sub<br>Code | P/U    | MD From Operation (ft)   |
|                                 | 6:00  | - 22:00            | 16.00            | DRLPRO           | 02       | D           | Р      | DRILL/ ROT F/ 8,961' TO 9,660' TD =699'= 43.18' FPH / WOB 18K-20K / TOP DRIVE RPM 40-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2100/1800 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 215/155/185/ TORQUE ON/OFF BOTTOM 8K/9K/ MUD WT 12.2 / VIS 48 / LCM 30% / MUD LOSE 200 BBL  |
|                                 | 22:00 | - 23:00            | 1.00             | DRLPRO           | 05       | С           | Р      | CIRC BTM'S UP @9,660' / 3/10 MUD CUT NO<br>FLARE / 40 BBL MUD LOSE   |
|                                 |       | - 0:00             | 1.00             | DRLPRO           | 06       | E           | P      | WIPER TRIP TO 7,800'   |
| 3/7/2011                        | 0:00  | - 1:30             | 1.50             | DRLPRO           | 06       | Ε           | Р      | WIPER TRIP / TIH F/ 7,800' TO 9,660'   |
|                                 |       | - 3:30             | 2.00             | DRLPRO           | 05       | С           | Р      | CIRC HOLE CLEAN @ 9,660' 150 BBL MUD LOS<br>150 BBL MUD LOSE   |
|                                 |       | - 8:00             | 4.50             | DRLPRO           | 06       | Α           | P      | TOOH TO SHOE @ 2,650'  |
|                                 |       | - 13:30            | 5.50             | DRLPRO           | 05       | F           | P      | CIRC OUT LCM CONTENT TO RUN 40 POINT<br>CALIPER LOG F/ 30% TO 2% / MEAN WHILE CI<br>& SLIP 117' DRILL LINE / 150 BBL MUD LOSE  |
|                                 |       | - 15:00            | 1.50             | DRLPRO           | 06       | Α           | Р      | TOOH TO RUN CALIPER LOG ON 8 5/8 CSG   |
|                                 |       | - 18:00<br>- 18:30 | 3.00<br>0.50     | DRLPRO<br>DRLPRO | 11<br>14 | E<br>B      | P<br>P | PJSM RUN 40 POINT CALIPER LOG IN 8 5/8 CS<br>F/250' TO SURFACE<br>PULL WEAR BUSHING  |
|                                 |       | - 20:30            |                  |                  |          |             | P      |  |
|                                 |       | - 0:00             | 2.00             | DRLPRO           | 12       | A<br>C      | P      | PJSM RU WEATHERFORD CSG EQUIPMENT  |
| 0/0/0044                        |       |                    | 3.50             | DRLPRO           | 12       |             | •      | RUN 61 JTS OF 4 1/2" 11.60 I-80 CSG TO 2,520'  |
| 3/8/2011                        |       | - 4:00             | 4.00             | COMP             | 12       | С           | P      | RUN 4 1/2" CSG F/ 2,520' TO 9,615' TOTAL JTS<br>RAN 232  |
|                                 |       | - 6:00             | 2.00             | COMP             | 12       | С           | S      | WASH CSG DOWN F/ 9,615' TO 9,634' UNABLE<br>WASH TO ORIGINAL CSG SETTING DEPTH OF<br>9,654' ( SHOE @ 9,634' / FLOAT COLLAR @ 9,60<br>M VERDE MARKER @ 7,527' / WASATCH MARK<br>@ 4,856'  |
|                                 | 6:00  | - 11:00            | 5.00             | COMP             | 12       | E           | P      | HSM RU BJ / TEST PUMPS & LINES TO 5000 PS PUMP 40 BBLS H2O + 480 SX LEAD CEMENT @ 12.5 ppg (PREM LITE II ) 134.95 BBLS FRESH WATER / (11.79 gal/sx, 2.17 yield) + 1021 SX TAI @ 14.3 ppg (CLS G 50/50 POZ 143.47 BBLS H2C (5.90 gal/sx, 1.31 yield) / DROP PLUG & DISPLAC W/ 149 BBLS H2O + ADDITIVES / PLUG DOWN (10:21 LIFT PRESSURE @ 2700 PSI BUMP PRESSURE @3200 W/ 5 BBLCMT BACK TO PIT LAST 10 BBLS LOST RETURNS/ FLOATS HELD W/ 1.5 BBLS H2O RETURNED TO INVENTORY / TOP OF TAIL CEMENT CALCULATED @ 4340', I MO CMT EQUIP |
|                                 | 11:00 | - 12:30            | 1.50             | COMP             | 14       | Α           | Р      | P/U BOP'S SET SLIPS WITH WETHERFORD /  |

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ND BOP'S RELEASE RIG @ 13:00 HRS 3/8/11

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12:30 - 13:00

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#### **US ROCKIES REGION Operation Summary Report** Spud Date: 1/27/2011 Well: NBU 921-25K4BS [YELLOW] Spud Conductor: 12/17/2010 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310 **Event: DRILLING** Start Date: 1/10/2011 End Date: 3/8/2011 Active Datum: RKB @4,997.00ft (above Mean Sea UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0 Level) P/U MD From Date Time Duration Phase Sub Operation Start-End Code (hr) (ft) 13:00 - 13:00 0.00 COMP CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28 SPUD DATE/TIME: 1/27/2011 20:30:00 AM SURFACE HOLE: Surface From depth: Surface To depth: 2,655 Total SURFACE hours: 30.00 Surface Casing size: 8 5/8 # of casing joints ran: 59 Casing set MD: 2,633.0 200/225/200 # sx of cement: Cement blend (ppg:) 11/15.8/15.8 Cement yield (ft3/sk): 3.83/1.15/1.15 # of bbls to surface: NONE Describe cement issues: NO CMT TO SURFACE 70% RETURNS F/2000-Describe hole issues: 2655 PRODUCTION: Rig Move/Skid start date/time: 2/28/2011 18:00 Rig Move/Skid finish date/time: 2/28/2011 19:00 Total MOVE hours: 1.0 Prod Rig Spud date/time: 3/1/2011 7:00 Rig Release date/time: 3/8/2011 13:00 Total SPUD to RR hours: 174.0 Planned depth MD 9734 Planned depth TVD 9643 Actual MD: 9.660 Actual TVD: 9,570 Open Wells \$: AFE \$: Open wells \$/ft: PRODUCTION HOLE: Prod. From depth: 2.672 Prod. To depth: 9,660 Total PROD hours: 113.5 Log Depth: 250 Production Casing size: 4 1/2 # of casing joints ran: 9.634.0 Casing set MD: # sx of cement: 480 / 1021 Cement blend (ppg:) 12.2 / 14.3 Cement yield (ft3/sk): 2.17 / 1.31 Est. TOC (Lead & Tail) or 2 Stage: 4340 / 0 Describe cement issues: 5 BBLCMT BACK 1 1/2 **BBL WATER BACK TO INVENTORY** 2000 BBL MUD LOSE Describe hole issues: DIRECTIONAL INFO: DIRECTIONAL

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2.68 / 391

KOP:

Max angle:

Departure:

Max dogleg MD:

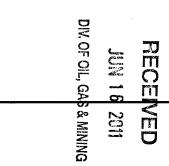
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JUN 16 2011

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# 1.1 Customer Information

General

| Company        | US ROCKIES REGION |
|----------------|-------------------|
| Representative |                   |
| Address        |                   |

# 1.2 Well Information

| Well         | NBU 921-25K4BS [YELLOW]                 |              |  |
|--------------|---|--------------|--|
| Common Name  | NBU 921-25K4BS                          |              |  |
| Well Name    | NBU 921-25K4BS                          | Wellbore No. | ОН                                     |
| Report No.   | 1                                       | Report Date  | 4/29/2011                              |
| Project      | UTAH-UINTAH                             | Site         | NBU 921-25K PAD                        |
| Rig Name/No. |   | Event        | COMPLETION                             |
| Start Date   | 4/29/2011                               | End Date     | 5/11/2011                              |
| Spud Date    | 1/27/2011                               | Active Datum | RKB @4,997.00ft (above Mean Sea Level) |
| UWI          | NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/ | /0/1400/0/0  |  |

# 1.3 General

| Contractor          | CASEDHOLE SOLUTIONS | Job Method      | PERFORATE | Supervisor | DAVE DANIELS |
|---------------------|---------------------|-----------------|-----------|------------|--------------|
| Perforated Assembly | PRODUCTION CASING   | Conveyed Method | WIRELINE  | ·          |              |

# 1.4 Initial Conditions

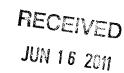
# 1.5 Summary

| Fluid Type               | ·       | Fluid Density      | Gross Interval   | 7,532.0 (ft)-9,533.0 (ft) | Start Date/Time          | 5/2/2011 | 12:00AM    |
|--------------------------|---------|--------------------|------------------|---------------------------|--------------------------|----------|------------|
| Surface Press            |         | Estimate Res Press | No. of intervals | 28                        | End Date/Time            | 5/2/2011 | 12:00AM    |
| TVD Fluid Top            |         | Fluid Head         | Total Shots      | 192                       | Net Perforation Interval |          | 55.00 (ft) |
| <b>Hydrostatic Press</b> |         | Press Difference   | Avg Shot Density | 3.49 (shot/ft)            | Final Surface Pressure   |          |            |
| Balance Cond             | NEUTRAL |                    |                  |                           | Final Press Date         |          |            |

# 2 Intervals

# 2.1 Perforated Interval

| Date Formation/   | CCL@ | CCL-T | MD Top  | MD Base | Shot      | Misfires/ | Diamete     | Carr Type /Carr Manuf | Carr  | Phasing | Charge Desc /Charge | Charge | Reason    | Misrun |
|-------------------|------|-------|---------|---------|-----------|-----------|-------------|-----------------------|-------|---------|---------------------|--------|-----------|--------|
| Reservoir         | (ft) | S     | (ft)    | (ft)    | Density   | Add. Shot | r           |                       | Size  | (°)     | Manufacturer        | Weight |           |        |
|                   |      | (ft)  |         |         | (shot/ft) |           | (in)        |                       | (in)  |         |                     | (gram) |           |        |
| 12:00AMMESAVERDE/ |      |       | 7,532.0 | 7,534.0 | 4.00      |           | 0.360       | EXP/                  | 3.375 | 90.00   |                     | 23.00  | PRODUCTIO |        |
|                   |      |       | *       |         |           |           | of the same |                       |       | ,<br>,  | 1                   |        | N         | -      |



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# 2.1 Perforated Interval (Continued)

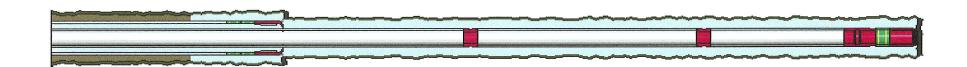
| Date    | Formation/<br>Reservoir | CCL@<br>(ft)   | CCL-T<br>S<br>(ft)   | MD Top<br>(ft) | (ft)    | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diamete<br>r<br>(in) | Carr Type /Carr Manuf | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer                        | Charge<br>Weight<br>(gram) | Reason         | Misrun   |
|---------|-------------------------|--|--|----------------|---------|------------------------------|------------------------|----------------------|-----------------------|----------------------|----------------|--|----------------------------|----------------|--|
| 12:00AM | MESAVERDE/              | 1  |  | 7,567.0        | 7,569.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO<br>N | e dinasa a sika  |
| 12:00AM | MESAVERDE/              |  |  | 7,600.0        | 7,602.0 | 4.00                         | W - V - 1515           | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              |  |  | 7,646.0        | 7,647.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          | and the second second second second second                 |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 7,671.0        | 7,673.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              |  | 1  | 7,708.0        | 7,710.0 | 3.00                         | 1.00                   | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              |  |  | 7,756.0        | 7,757.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              | and the second s |  | 7,777.0        | 7,779.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  | 4  | 7,924.0        | 7,927.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODÚCTIO<br>N | Company of the compan |
| 12:00AM | MESAVERDE/              |  |  | 7,957.0        | 7,958.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          | u <del>-</del> <del>-</del> .                              | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | en de la constante de la const |  | 8,110.0        | 8,114.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 8,206.0        | 8,208.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | Constitution of the Consti | 2  | 8,243.0        | 8,245.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          | an e e e e   |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | on a second  |  | 8,338.0        | 8,340.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | The state of the s |  | 8,485.0        | 8,487.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 8,558.0        | 8,560.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | 400 100 100 100 100 100 100 100 100 100  |  | 8,618.0        | 8,620.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | 1000   | 1  | 8,884.0        | 8,886.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | A Company of the Comp |  | 8,915.0        | 8,917.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         | e e alem o de estado e e e e e e e e e e e e e e e e e e e | and the second second      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 8,941.0        | 8,943.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  | The second decrease of | 9,017.0        | 9,019.0 | 3.00                         | and the second         | 0.360                | EXP/                  | 3.375                | 120.00         |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | erry consense in the season  | The Albanda Company of | 9,088.0        | 9,090.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |

# 2.1 Perforated Interval (Continued)

| Date     | Formation/ |  | THE STREET WAS ASSESSED. |         | MD Base |                      |   |           | Carr Type /Carr Manuf |              | Phasing | Charge Desc /Charge | Charge           | Reason         | Misrun                  |
|----------|------------|--|--------------------------|---------|---------|----------------------|---|-----------|-----------------------|--------------|---------|---------------------|------------------|----------------|-------------------------|
|          | Reservoir  | (ft)   | S<br>(ft)                | (ft)    |         | Density<br>(shot/ft) | Add. Shot   | r<br>(in) |                       | Size<br>(in) | (°)     | Manufacturer        | Weight<br>(gram) |                |                         |
| 12:00AM  | MESAVERDE/ |  |                          | 9,140.0 | 9,142.0 | 3.00                 |   | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N | Property and the second |
| 12:00AMN | MESAVERDE/ |  |                          | 9,216.0 | 9,217.0 | 4.00                 |   | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMN | MESAVERDE/ |  |                          | 9,282.0 | 9,284.0 | 4.00                 | NEW VIOLATION PROPERTY OF THE | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMM | MESAVERDE/ |  |                          | 9,357.0 | 9,359.0 | 4.00                 | elandes (interior per la metro de la m  | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMM | MESAVERDE/ |  |                          | 9,398.0 | 9,400.0 | 4.00                 |   | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMM | MESAVERDE/ | The state of the s |                          | 9,531.0 | 9,533.0 | 4.00                 | izan Miniar in Norwei zo two mienie zobe Mi   | 0.360     | EXP/                  | 3.375        | 90.00   |                     | 23.00            | PRODUCTIO<br>N |                         |

# 3 Plots

# 3.1 Wellbore Schematic





# **Operation Summary Report**

| Well: NBU 921-25K4BS [YELLOW]          | Spud Conductor    | r: 12/17/2010  | Spud Date: 1/27/2011                         |
|--|-------------------|----------------|--|
| Project: UTAH-UINTAH                   | Site: NBU 921-2   | 5K PAD         | Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3 |
| Event: COMPLETION                      | Start Date: 4/29/ | 2011           | End Date: 5/11/2011                          |
| Active Datum: RKB @4 997 00ft (above M | ean Sea LIWI: N   | JE/SW/0/9/S/21 | /F/25/0/0/26/PM/S/1838/W/0/1400/0/0          |

Level)

| "е | vel)      |      |                 |                  |       |      |             |     |  |
|----|-----------|------|-----------------|------------------|-------|------|-------------|-----|--|
|    | Date      |      | Time<br>art-End | Duration<br>(hr) | Phase | Code | Sub<br>Code | P/U | MD From Operation (ft)   |
|    | 4/29/2011 | 7:00 | - 16:00         | 9.00             | COMP  | 47   | В           | P   | HSM, PRESSURE TESTING, MIRU B&C TESTERS, PRESSURE UP TO 1,000# W/ 10# LOSS IN 15 MIN. BUMP UP TO 3,500# W/ 33# LOSS IN 15 MIN. BUMP UP TO 7000# W/ 95# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 70# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 55# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 55# LOSS IN 30 MIN. [GOOD TEST] |
|    | 5/2/2011  | 6:15 | - 6:30          | 0.25             | COMP  | 48   |             | P   | HSM, RIGGING UP  |
|    |           | 6:30 | - 6:30          | 0.00             | COMP  | 36   | E           | Р   | MIRU CASED HOLE SOLUTIONS & SUPERIOR FRAC EQUIP.,  |

P/U RIH PERF MESAVERDE W/ 3-1/8 EXPEND, 23 GRM 0.36" HOLE, 9,357'-9,533' [24 HOLES] AS PERSAY IN PROCEDURE.

FRAC STG #1] WHP=1,205#, BRK DN PERFS=3,121#, @=4.6 BPM, INJ RT=50, INJ PSI=6,010#, ISIP=2,686#, FG=.72, PUMP'D 926 BBLS SLK WTR W/ 9,791# 30/50 MESH W/ 4,693# RESIN COAT IN TAIL W/ 14,484# TOTAL PROP PUMP'D, ISIP=2,881#, FG=.74, AR=49.3, AP=5,851#, MR=50.8, MP=6,649#, NPI=195#, 21/24 CALC PERFS OPEN. 87%

PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9.314', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 9,088'-9,284' [24 HOLES] AS PERSAY I PROCEDURE.

FRAC STG #2] WHP=2,570#, BRK DN PERFS=3,636#, @=4.7 BPM, INJ RT=43.3, INJ PSI=5,472#, ISIP=3,002#, FG=.77, PUMP'D 753 BBLS SLK WTR W/ 9,618# 30/50 MESH W/ 4,886# RESIN COAT IN TAIL W/ 14,504# TOTAL PROP PUMP'D, ISIP=2,820#, FG=.75, AR=47.5, AP=5,753#, MR=49.6, MP=6,583#, NPI=-182#, 22/24 CALC PERFS OPEN. 90%

PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9,049', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,884'-9,019' [24 HOLES] AS PERSAY IN PROCEDURE.

FRAC STG #3] WHP=926#, BRK DN PERFS=3,229#, @=4.7 BPM, INJ RT=46.2, INJ PSI=6,177#, ISIP=2,892#, FG=.76, PUMP'D 932 BBLS SLK WTR W/ 13,791# 30/50 MESH W/ 4,725# RESIN COAT IN TAIL W/ 18,516# TOTAL PROP PUMP'D, ISIP=2,812#, FG=.75, AR=49.4, AP=6,072#, MR=52.4, MP=6,654#, NPI=-80#, 18/24 CALC PERFS OPEN. 76%

PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8'670', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,485'-8,620' [24 HOLEWS] AS PERSAY IN PROCEDURE SWIFN.

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|                         | -25K4BS [YELLO\   | N]               | Spud Co         | onductor         | : 12/17/2   | 010      | Spud Date: 1/2    | 1   |  |  |  |
|-------------------------|-------------------|------------------|-----------------|------------------|-------------|----------|-------------------|---|--|--|--|
| Project: UTAH           |                   |                  | Site: NB        |                  |             |          |                   | Rig Name No: ROCKY MOUNTAIN WELL<br>SERVICE 3/3   |  |  |  |
| event: COMPL            |                   |                  | Start Da        | 7                |             |          |                   | End Date: 5/11/2011   |  |  |  |
| Active Datum:<br>.evel) | RKB @4,997.00ft ( | above Mean       | Sea             | UWI: N           | IE/SW/0/    | 9/S/21/E | E/25/0/0/26/PM/S/ | 1838/W/0/1400/0/0   |  |  |  |
| Date                    | Time<br>Start-End | Duration<br>(hr) | Phase           | Code             | Sub<br>Code | P/U      | MD From<br>(ft)   | Operation   |  |  |  |
| 5/3/2011                | 6:45 - 7:00       | 0.25             | COMP            | 48               |             | P        |                   | HSM,  |  |  |  |
|                         | 7:00 - 17:30      | 10.50            | COMP            | 36               | E           | P        |                   | FRAC STG #4 8,485'-8,620' [24 HOLES]  FRAC STG #4] WHP=1,700#, BRK DN  PERFS=3,492#, @=4.8 BPM, INJ RT=44, INJ  PSI=5,885#, ISIP=2,552#, FG=.74, PUMP'D 643  BBLS SLK WTR W/ 7,039# 30/50 MESH W/ 5,057#  RESIN COAT IN TAIL W/ 12,096# TOTAL PROP  PUMP'D, ISIP=2,417#, FG=.72, AR=45.6,  AP=5,867#, MR=48.2, MP=6,674#, NPI=-135#,  17/24 CALC PERFS OPEN. 69%. |  |  |  |
|                         |                   |                  |                 |                  |             |          |                   | PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP 6<br>PERF GUN, SET CBP @=8,390', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36<br>HOLE. 8,206'-8,340' [24 HOLES] AS PERSAY IN<br>PROCEDURE.  |  |  |  |
|                         |                   |                  |                 |                  |             |          |                   | FRAC STG #5] WHP=1,368#, BRK DN PERFS=3,700#, @=4.6 BPM, INJ RT=42, INJ PSI=5,144#, ISIP=2,730#, FG=.77, PUMP'D 593 BBLS SLK WTR W/ 6,325# 30/50 MESH W/ 4,826# RESIN COAT IN TAIL W/ 11,151# TOTAL PROP PUMP'D, ISIP=2,772#, FG=.77, AR=46.8, AP=5,523#, MR=48.8, MP=5,988#, NPI=42#, 20/24 CALC PERFS OPEN. 84%.  |  |  |  |
|                         |                   |                  |                 |                  |             |          |                   | PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP<br>PERF GUN, SET CBP @=8,154', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.3<br>HOLE. 7,924'-8,114' [24 HOLES] AS PERSAY IN<br>PROCEDURE.   |  |  |  |
|                         |                   |                  |                 |                  |             |          |                   | FRAC STG #6] WHP=1,203#, BRK DN PERFS=2,634#, @=4.6 BPM, INJ RT=49.5, INJ PSI=5,590#, ISIP=1,888#, FG=67, PUMP'D 710 BBLS SLK WTR W/ 9,256# 30/50 MESH W/ 4,976# RESIN COAT IN TAIL W/ 14,232# TOTAL PROP PUMP'D, ISIP=2,367#, FG=.73, AR=47.1, AP=5,927#, MR=49.9, MP=6,587#, NPI=479# 18/2 CALC PERFS OPEN. 74%   |  |  |  |
|                         |                   |                  |                 |                  |             |          |                   | PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP<br>PERF GUN, SET CBP @=7,829', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.3<br>HOLE. 7,646'-7,779' [24 HOLES] AS PERSAY IN<br>PROCEDURE.   |  |  |  |
|                         |                   |                  |                 | -                | VED         |          |                   | FRAC STG #7] WHP=1,185#, BRK DN<br>PERFS=3,790#, @=4.6 BPM, INJ RT=49.7, INJ  |  |  |  |
|                         |                   |                  | JU<br>DIV. OF ( | IN 16<br>DIL, GA |             | ING      |                   | PSI=5,506#, ISIP=1,705#, FG=66, PUMP'D 1,465<br>BBLS SLK WTR W/ 27,537# 30/50 MESH W/ 5,111<br>RESIN COAT IN TAIL W/ 32,648# TOTAL PROP<br>PUMP'D, ISIP=2,006#, FG=.70, AR=49.6,<br>AP=4,766#, MR=50.2, MP=6,178#, NPI=301#, 17/2<br>CALC PERFS OPEN. 72%   |  |  |  |
|                         | 6:30 - 6:45       | 0.25             | COMP            | 48               |             | P        |                   | PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP<br>PERF GUN, SET CBP @=7,632', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.3<br>HOLE. 7,532'-7,602' [24 HOLES] AS PERSAY IN<br>PROCEDURE. SWIFN.<br>HSM, FRACING & RIGGING DOWN   |  |  |  |

6/7/2011 11:03:55AM 2

#### **US ROCKIES REGION Operation Summary Report** Spud Conductor: 12/17/2010 Spud Date: 1/27/2011 Well: NBU 921-25K4BS [YELLOW] Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3 **Event: COMPLETION** Start Date: 4/29/2011 End Date: 5/11/2011 UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0 Active Datum: RKB @4,997.00ft (above Mean Sea P/U MD From Date Time Duration Phase Code Sub Operation Start-End (hr) Code (ft) 6:45 - 6:45 0.00 COMP 36 P FRAC MESAVERDE STG #8 7,532'-7,602' [24 Ε HOLES] FRAC STG #8] WHP=1,120#, BRK DN PERFS=1,760#, @=4.3 BPM, INJ RT=48.8, INJ PSI=5,266#, ISIP=1,266#, FG=.61, PUMP'D 1,262 BBLS SLK WTR W/ 34,999# 30/50 MESH W/ 6,088# RESIN COAT IN TAIL W/ 41,087# TOTAL PROP PUMP'D, ISIP=2,293#, FG=.74, AR=45.8, AP=4,743#, MR=49.2, MP=5,619#, NPI=1,027#, 16/24 CALC PERFS OPEN. 67%. P/U RIH W/ HALIBURTON 8K CBP SET FOR TOP KILL @=7,482' 7,284 TOTAL WTR 158.718# TOTAL SAND 735 GALS SCALE INHIB. 173 GALS BIOCIDE 7:00 - 17:00 5/10/2011 10.00 COMP 30 Α 7AM [DAY 5] JSA-R/D RIG, R/U RIG, NDWH, NUBOP. P/U TBG. RAINY WEATHER. RIG DOWN FROM NBU 921-25L4AS. MOVE OVER AND R/U ON NBU 921-25K4BS. [3RD OF 4 WELL PAD] YELLOW WELL. SPOT EQUIPMENT. NDWH, NUBOP. R/U FLOOR & TBG EQUIPMENT. P/U 3-7/8" SEALED BRG BIT, POBS W/ XN NIPPLE, NEW 2-3/8" L-80 TBG AND RIH. [SLM & DRIFTED] TAG SAND AT 7452'. R/U SWVL & RIG PUMP. ESTABLISH CIRCULATION, P.T. SURFACE LINES & BOP TO 3000#, LOSS 0# IN 15 MIN. C/O 30' SAND TO CBP#1. [DRLG CBP#1] @ 7482'. D/O HALL 8K CBP IN 10 MIN. 100# INC. RIH & C/O 30' SAND TO CBP#2. FCP=100#. [DRLG CBP#2] @ 7632'. D/O HALL 8K CBP IN 4 MIN. 100# INC. RIH & C/O 30' SAND TO CBP#3. CIRCULATE WELL CLEAN. FCP=200#. PUH W/ EOT @ 7797'. 5 PM SWI-SDFN. PREP TO D/O 6 MORE PLUGS IN

AM AND LAND TBG.

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6/7/2011

11:03:55AM

# **Operation Summary Report**

| Well: NBU 92            | -25K4BS [YELLO    | W]            | Spud C   | onductor  | : 12/17/2   | 010      | Spud Date: 1/27/2011   |
|-------------------------|-------------------|---------------|----------|-----------|-------------|----------|--|
| Project: UTAH           | -UINTAH           |               | Site: NE | BU 921-2  | 5K PAD      |          | Rig Name No: ROCKY MOUNTAIN WELL<br>SERVICE 3/3  |
| Event: COMPI            | ETION             |               | Start Da | te: 4/29/ | 2011        |          | End Date: 5/11/2011  |
| Active Datum:<br>Level) | RKB @4,997.00ft   | (above Mean   | Sea      | UWI: N    | IE/SW/0/    | 9/S/21/E | /25/0/0/26/PM/S/1838/W/0/1400/0/0  |
| Date                    | Time<br>Start-End | Duration (hr) | Phase    | Code      | Sub<br>Code | P/U      | MD From Operation (ft)   |
| 5/11/2011               | 7:00 - 16:00      | 9.00          | COMP     | 30        | ,           | Р        | 7AM [DAY 6] JSA DRLG PLUGS, PSI, LAND TBG, NDBOP, NUWH. R/D RIG, R/U RIG.  |
|                         |                   |               |          |           |             |          | SITP=0#. SICP=900#. EOT @ 7797'. OPEN WELL<br>TO PIT & BLEED DOWN PSI TO 200# IN 5 MIN.<br>CONTINUE DRILLING PLUGS.  |
|                         |                   |               |          |           |             |          | [DRLG CBP#3] @ 7829'. D/O HALL 8K CBP IN 5<br>MIN. 0# INC. RIH & C/O 30' SAND TO CBP#4.<br>FCP=200#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#4] @ 8154'. D/O HALL 8K CBP IN 7<br>MIN. 100# INC. RIH & C/O 15' SAND TO CBP#5.<br>FCP=400#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#5] @ 8390'. D/O HALL 8K CBP IN 5<br>MIN. 300# INC. RIH & C/O 30' SAND TO CBP#6.<br>FCP=700#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#6] @ 8670'. D/O HALL 8K CBP IN 7<br>MIN. 150# INC. RIH & C/O 35' SAND TO CBP#7.<br>FCP=600#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#7] @ 9049'. D/O HALL 8K CBP IN 4<br>MIN. 200# INC. RIH & C/O 25' SAND TO CBP#8.<br>FCP=700#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#8] @ 9314'. D/O HALL 8K CBP IN 4 MIN. 300# INC. RIH, TAG SAND @ 9533'. C/O 78' SAND TO PBTD @ 9611'. B.P. @ 9533'. C/O 78' SAND TO PBTD @ 9611'. B.P. @ 9533'. CIRCULATE WELL CLEAN. R/D SWVL. POOH & L/D 18 JTS ON FLOAT. PIPE RAMS NOT SEALING GOOD. LAND TBG ON HANGER W/ 285 JTS NEW 2-3/8" L-80 TBG. EOT @ 9054.43', POBS W/ XN @ 9052.23'. R/D FLOOR & TBG EQUIPMENT. DROP BALL DN TBG. NDBOP, NUWH. PUMP OFF THE BIT @ 2200#. OPEN WELL TO FBT TO UNLOAD TBG VOLUME. 9 MIN TO UNLOAD. |
|                         |                   |               | F        | RECE      | EIVE        | D        | 1PM TURN WELL OVER TO DELSCO FBC & APC MAINT CREW. FTP=2000#, SICP=2000#, 20/64 CHOKE SELLING @ 1.7 MCF DAILY RATE. RIG PMP'D 250 BBLS. LTR=5784 BBLS.   |
|                         |                   |               | 1.       | JUN 1     | 6 20        | 1        | RACK EQUIPMENT. R/D RIG. MOVE OVER & R/U<br>ON NBU 921-25L2AS [GRN WELL] 4 OF 4 ON PAD.  |
|                         |                   |               | DIV.     | OF OIL,   | gas & N     | IINING   | NDWH, NUBOP. R/U FLOOR & TBG EQUIPMENT.<br>CHANGE OUT PIPE RAMS IN BOP.  |
|                         |                   |               |          |           |             |          | 4 PM SDFN. PREP TO P/U BIT & TBG IN AM.  |
|                         |                   |               |          |           |             |          | 315 JTS DELIVERED<br>285 LANDED<br>29 RETURNED<br>1 JUNK   |
|                         | 13:00 - 13:00     | 0.00          | PROD     | 50        |             |          | WELL TURNED TO SALES @ 1300 HRON 5/11/11 - 1797 MCFD, 1680 BWPD, CP 2000#, FTP 2000#, CK 20/64"  |
| 5/16/2011               | 7:00 -            |               |          | 50        |             |          | WELL IP'D ON 5/16/11 - 2426 MCFD, 0 BOPD, 480<br>BWPD, CP 3019#, FTP 1821#, CK 20/64", LP 166#,<br>24 HRS  |

6/7/2011 11:03:55AM

# JUN 16 2011

# 1 General

# DIV. OF OIL, GAS & MINING

#### 1.1 Customer Information

| Company        | US ROCKIES REGION |
|----------------|-------------------|
| Representative |                   |
| Address        |                   |

# 1.2 Well Information

| Well                        | NBU 921-25K4BS [YELLOW]                | Wellbore No.      | ОН  |
|-----------------------------|--|-------------------|---|
| Well Name                   | NBU 921-25K4BS                         | Common Name       | NBU 921-25K4BS  |
| Project                     | UTAH-UINTAH                            | Site              | NBU 921-25K PAD                                       |
| Vertical Section<br>Azimuth | 89.00 (                                | ) North Reference | True  |
| Origin N/S                  |  | Origin E/W        |   |
| Spud Date                   | 1/27/2011                              | UWI               | NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/14<br>00/0/0 |
| Active Datum                | RKB @4,997.00ft (above Mean Sea Level) | •                 |   |

# 2 Survey Name

# 2.1 Survey Name: Survey #1

| Survey Name | Survey #1 | Company  | WEATHERFORD |
|-------------|-----------|----------|-------------|
| Started     | 1/27/2011 | Ended    |             |
| Tool Name   | MWD       | Engineer | Anadarko    |

# 2.1.1 Tie On Point

| MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD (ft) |      | N    |
|------------|------------|------------|----------|------|------|
| 17.00      | 0.00       | 0.00       | 17.00    | 0.00 | 0.00 |

# 2.1.2 Survey Stations

| Date   | Туре   | MD       | Inc   | Azi   | TVD      | N/S   | E/W    | V. Sec | DLeg      | Build     | Turn      | TFace   |
|--|--------|----------|-------|-------|----------|-------|--------|--------|-----------|-----------|-----------|---------|
|  |        | (ft)     | (°)   | (°)   | (ft)     | (ft)  | (ft)   | (ft)   | (°/100ft) | (°/100ft) | (°/100ft) | (°)     |
| 1/27/2011  | Tie On | 17.00    | 0.00  | 0.00  | 17.00    | 0.00  | 0.00   | 0.00   | 0.00      | 0.00      | 0.00      | 0.00    |
| 1/27/2011  | NORMAL | 221.00   | 1.02  | 79.93 | 220.99   | 0.32  | 1.79   | 1.79   | 0.50      | 0.50      | 0.00      | 79.93   |
|  | NORMAL | 314.00   | 3.08  | 84.97 | 313.92   | 0.68  | 5.09   | 5.10   | 2.22      | 2.22      | 5.42      | 7.52    |
| 1/28/2011  | NORMAL | 408.00   | 5.55  | 77.80 | 407.65   | 1.86  | 12.05  | 12.08  | 2.68      | 2.63      | -7.63     | -15.91  |
| The same of the sa | NORMAL | 503.00   | 7.63  | 75.43 | 502.02   | 4.42  | 22.65  | 22.72  | 2.21      | 2.19      | -2.49     | -8.63   |
|  | NORMAL | 598.00   | 9.18  | 81.94 | 596.00   | 7.07  | 36.26  | 36.37  | 1.91      | 1.63      | 6.85      | 34.79   |
|  | NORMAL | 694.00   | 10.40 | 90.00 | 690.60   | 8.14  | 52.50  | 52.64  | 1.91      | 1.27      | 8.40      | 52.34   |
|  | NORMAL | 789.00   | 10.75 | 90.41 | 783.99   | 8.08  | 69.94  | 70.07  | 0.38      | 0.37      | 0.43      | 12.33   |
|  | NORMAL | 884.00   | 11.13 | 91.54 | 877.26   | 7.77  | 87.96  | 88.09  | 0.46      | 0.40      | 1.19      | 29.99   |
|  | NORMAL | 979.00   | 11.88 | 85.04 | 970.36   | 8.37  | 106.87 | 107.00 | 1.58      | 0.79      | -6.84     | -63.16  |
|  | NORMAL | 1,073.00 | 12.19 | 83.66 | 1,062.29 | 10.30 | 126.38 | 126.54 | 0.45      | 0.33      | -1.47     | -43.54  |
|  | NORMAL | 1,168.00 | 12.13 | 82.66 | 1,155.16 | 12.69 | 146.24 | 146.44 | 0.23      | -0.06     | -1.05     | -106.39 |
| 1000 THE RESERVE OF T | NORMAL | 1,263.00 | 13.34 | 82.63 | 1,247.82 | 15.37 | 167.01 | 167.26 | 1.27      | 1.27      | -0.03     | -0.33   |
|  | NORMAL | 1,359.00 | 14.29 | 84.91 | 1,341.04 | 17.84 | 189.80 | 190.08 | 1.14      | 0.99      | 2.38      | 30.93   |
|  | NORMAL | 1,454.00 | 14.44 | 84.41 | 1,433.07 | 20.03 | 213.26 | 213.58 | 0.20      | 0.16      | -0.53     | -39.83  |
|  | NORMAL | 1,548.00 | 15.50 | 86.66 | 1,523.88 | 21.91 | 237.47 | 237.82 | 1.29      | 1.13      | 2.39      | 29.83   |
|  | NORMAL | 1,642.00 | 16.00 | 87.79 | 1,614.35 | 23.14 | 262.95 | 263.32 | 0.62      | 0.53      | 1.20      | 32.07   |
|  | NORMAL | 1,738.00 | 16.50 | 87.16 | 1,706.52 | 24.32 | 289.79 | 290.17 | 0.55      | 0.52      | -0.66     | -19.72  |
|  | NORMAL | 1,833.00 | 16.75 | 86.41 | 1,797.55 | 25.85 | 316.93 | 317.33 | 0.35      | 0.26      | -0.79     | -41.00  |
| The Probability of the Control | NORMAL | 1,927.00 | 17.31 | 86.79 | 1,887.42 | 27.48 | 344.41 | 344.84 | 0.61      | 0.60      | 0.40      | 11.42   |
| the state of the sale for a second   | NORMAL | 2,023.00 | 18.00 | 86.29 | 1,978.90 | 29.24 | 373.47 | 373.92 | 0.74      | 0.72      | -0.52     | -12.63  |

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# JUN 16 2011

DIV. OF OIL, GAS & MINING

**US ROCKIES REGION** 

DIM OF UIL, CAS & MINING

# 2.1.2 Survey Stations (Continued)

| Date   | Type   | MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|--|--------|------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--------------------|-------------------|--------------|
| 1/28/2011  | NORMAL | 2,118.00   | 17.69      | 85.16      | 2,069.33    | 31.41       | 402.50      | 402.99         | 0.49              | -0.33              | -1.19             | -132.37      |
|  | NORMAL | 2,213.00   | 17.94      | 86.04      | 2,159.78    | 33.64       | 431.48      | 432.00         | 0.39              | 0.26               | 0.93              | 47.54        |
|  | NORMAL | 2,308.00   | 17.56      | 85.16      | 2,250.25    | 35.85       | 460.35      | 460.91         | 0.49              | -0.40              | -0.93             | -145.20      |
| 1/29/2011  | NORMAL | 2,402.00   | 17.69      | 87.91      | 2,339.84    | 37.57       | 488.76      | 489.34         | 0.90              | 0.14               | 2.93              | 82.44        |
|  | NORMAL | 2,497.00   | 18.06      | 88.04      | 2,430.26    | 38.60       | 517.90      | 518.49         | 0.39              | 0.39               | 0.14              | 6.22         |
| Manager College Control Contro | NORMAL | 2,612.00   | 16.15      | 82.15      | 2,540.17    | 41.40       | 551.56      | 552.20         | 2.24              | -1.66              | -5.12             | -140.58      |

# 2.2 Survey Name: Survey #2

| Survey Name | Survey #2 | Company  | WEATHERFORD |
|-------------|-----------|----------|-------------|
| Started     | 3/1/2011  | Ended    |             |
| Tool Name   | MWD       | Engineer | Anadarko    |

# 2.2.1 Tie On Point

| MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W (ft) |
|------------|------------|------------|-------------|-------------|----------|
| 2,612.00   | 16.15      | 82.15      | 2,540.17    | 41.40       | 551.56   |

# 2.2.2 Survey Stations

| Date   | Туре   | MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|--|--------|------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--------------------|-------------------|--------------|
| 3/1/2011   | Tie On | 2,612.00   | 16.15      | 82.15      | 2,540.17    | 41.40       | 551.56      | 552.20         | 0.00              | 0.00               | 0.00              | 0.00         |
| 3/1/2011   | NORMAL | 2,752.00   | 14.57      | 75.38      | 2,675.18    | 48.50       | 587.90      | 588.65         | 1.71              | -1.13              | -4.84             | -134.61      |
| The second second  | NORMAL | 2,846.00   | 12.63      | 78.03      | 2,766.54    | 53.62       | 609.39      | 610.23         | 2.17              | -2.06              | 2.82              | 163.48       |
|  | NORMAL | 2,941.00   | 11.56      | 84.90      | 2,859.44    | 56.62       | 629.03      | 629.93         | 1.89              | -1.13              | 7.23              | 129.95       |
|  | NORMAL | 3,035.00   | 10.13      | 83.53      | 2,951.75    | 58.39       | 646.63      | 647.55         | 1.55              | -1.52              | -1.46             | -170.45      |
|  | NORMAL | 3,130.00   | 9.56       | 81.78      | 3,045.36    | 60.46       | 662.74      | 663.69         | 0.68              | -0.60              | -1.84             | -153.16      |
|  | NORMAL | 3,225.00   | 8.81       | 88.15      | 3,139.14    | 61.82       | 677.82      | 678.79         | 1.33              | -0.79              | 6.71              | 129.53       |
|  | NORMAL | 3,320.00   | 8.44       | 88.65      | 3,233.06    | 62.22       | 692.06      | 693.04         | 0.40              | -0.39              | 0.53              | 168.79       |
|  | NORMAL | 3,414.00   | 6.50       | 90.03      | 3,326.26    | 62.38       | 704.28      | 705.26         | 2.07              | -2.06              | 1.47              | 175.40       |
|  | NORMAL | 3,509.00   | 5.75       | 91.28      | 3,420.72    | 62.27       | 714.41      | 715.39         | 0.80              | -0.79              | 1.32              | 170.54       |
|  | NORMAL | 3,603.00   | 4.00       | 90.15      | 3,514.38    | 62.16       | 722.40      | 723.38         | 1.86              | -1.86              | -1.20             | -177.42      |
| ha 1   | NORMAL | 3,698.00   | 3.63       | 91.78      | 3,609.17    | 62.05       | 728.72      | 729.69         | 0.41              | -0.39              | 1.72              | 164.48       |
| collection on Management and the   | NORMAL | 3,793.00   | 2.38       | 84.28      | 3,704.03    | 62.16       | 733.69      | 734.66         | 1.38              | -1.32              | -7.89             | -166.26      |
|  | NORMAL | 3,887.00   | 2.00       | 84.53      | 3,797.96    | 62.51       | 737.26      | 738.24         | 0.40              | -0.40              | 0.27              | 178.68       |
|  | NORMAL | 3,982.00   | 1.63       | 88.29      | 3,892.92    | 62.71       | 740.26      | 741.25         | 0.41              | -0.39              | 3.96              | 164.03       |
|  | NORMAL | 4,077.00   | 1.13       | 115.65     | 3,987.89    | 62.34       | 742.46      | 743.43         | 0.86              | -0.53              | 28.80             | 140.34       |
|  | NORMAL | 4,172.00   | 1.13       | 130.53     | 4,082.87    | 61.33       | 744.02      | 744.97         | 0.31              | 0.00               | 15.66             | 97.44        |
|  | NORMAL | 4,267.00   | 1.13       | 137.40     | 4,177.85    | 60.03       | 745.36      | 746.30         | 0.14              | 0.00               | 7.23              | 93.43        |
|  | NORMAL | 4,362.00   | 0.38       | 192.53     | 4,272.84    | 59.03       | 745.93      | 746.84         | 1.02              | -0.79              | 58.03             | 161.14       |
|  | NORMAL | 4,456.00   | 0.81       | 183.90     | 4,366.84    | 58.06       | 745.81      | 746.71         | 0.47              | 0.46               | -9.18             | -16.11       |
|  | NORMAL | 4,551.00   | 0.13       | 184.28     | 4,461.84    | 57.29       | 745.76      | 746.65         | 0.72              | -0.72              | 0.40              | 179.93       |
| and the same and t | NORMAL | 4,646.00   | 0.81       | 189.53     | 4,556.83    | 56.52       | 745.64      | 746.51         | 0.72              | 0.72               | 5.53              | 6.25         |
|  | NORMAL | 4,741.00   | 0.19       | 159.28     | 4,651.83    | 55.71       | 745.59      | 746.44         | 0.69              | -0.65              | -31.84            | -171.57      |
| and the territory of the second territory of the   | NORMAL | 4,835.00   | 0.25       | 153.78     | 4,745.83    | 55.38       | 745.73      | 746.58         | 0.07              | 0.06               | -5.85             | -22.15       |
|  | NORMAL | 4,930.00   | 0.63       | 170.53     | 4,840.82    | 54.68       | 745.91      | 746.75         | 0.42              | 0.40               | 17.63             | 27.20        |
|  | NORMAL | 5,025.00   | 0.69       | 161.78     | 4,935.82    | 53.62       | 746.17      | 747.00         | 0.12              | 0.06               | -9.21             | -63.66       |
| 3/2/2011   | NORMAL | 5,120.00   | 0.75       | 169.28     | 5,030.81    | 52.46       | 746.47      | 747.27         | 0.12              | 0.06               | 7.89              | 61.30        |
|  | NORMAL | 5,215.00   | 0.75       | 175.28     | 5,125.80    | 51.23       | 746.64      | 747.42         | 0.08              | 0.00               | 6.32              | 93.00        |
|  | NORMAL | 5,309.00   | 0.94       | 187.15     | 5,219.79    | 49.85       | 746.59      | 747.35         | 0.27              | 0.20               | 12.63             | 48.69        |
|  | NORMAL | 5,404.00   | 1.06       | 184.78     | 5,314.78    | 48.21       | 746.42      | 747.15         | 0.13              | 0.13               | -2.49             | -20.21       |
|  | NORMAL | 5,499.00   | 0.63       | 145.65     | 5,409.77    | 46.90       | 746.64      | 747.35         | 0.73              | -0.45              | -41.19            | -145.16      |
|  | NORMAL | 5,594.00   | 0.88       | 142.78     | 5,504.76    | 45.89       | 747.38      | 748.06         | 0.27              | 0.26               | -3.02             | -10.04       |
|  | NORMAL | 5,688.00   | 0.69       | 146.78     | 5,598.75    | 44.84       | 748.12      | 748.79         | 0.21              | -0.20              | 4.26              | 165.90       |

# 2.2.2 Survey Stations (Continued)

| Date                                   | Type   | MD<br>(ft) | inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°)   |
|--|--------|------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--------------------|-------------------|--|
| 3/2/2011                               | NORMAL | 5,783.00   | 1.00       | 185.65     | 5,693.74    | 43.53       | 748.36      | 749.00         | 0.67              | 0.33               | 40.92             | 81.96  |
|  | NORMAL | 5,878.00   | 1.06       | 183.53     | 5,788.73    | 41.83       | 748.22      | 748.84         | 0.07              | 0.06               | -2.23             | -33.48   |
|  | NORMAL | 5,973.00   | 1.13       | 188.15     | 5,883.71    | 40.03       | 748.03      | 748.62         | 0.12              | 0.07               | 4.86              | 53.92  |
|  | NORMAL | 6,067.00   | 1.19       | 184.28     | 5,977.69    | 38.14       | 747.83      | 748.38         | 0.10              | 0.06               | -4.12             | -54.50   |
|  | NORMAL | 6,162.00   | 0.50       | 145.03     | 6,072.68    | 36.81       | 747.99      | 748.52         | 0.91              | -0.73              | -41.32            | -158.49  |
|  | NORMAL | 6,257.00   | 1.00       | 129.90     | 6,167.67    | 35.94       | 748.87      | 749.38         | 0.56              | 0.53               | -15.93            | -29.29   |
|  | NORMAL | 6,352.00   | 1.06       | 138.78     | 6,262.66    | 34.75       | 750.08      | 750.57         | 0.18              | 0.06               | 9.35              | 73.88  |
|  | NORMAL | 6,447.00   | 1.25       | 146.65     | 6,357.64    | 33.22       | 751.23      | 751.70         | 0.26              | 0.20               | 8.28              | 43.84  |
|  | NORMAL | 6,541.00   | 0.44       | 153.28     | 6,451.62    | 32.04       | 751.96      | 752.40         | 0.87              | -0.86              | 7.05              | 176.42   |
| 3/3/2011                               | NORMAL | 6,731.00   | 0.69       | 171.03     | 6,641.62    | 30.26       | 752.46      | 752.88         | 0.16              | 0.13               | 9.34              | 44.09  |
|  | NORMAL | 6,826.00   | 1.06       | 175.15     | 6,736.60    | 28.82       | 752.63      | 753.01         | 0.39              | 0.39               | 4.34              | 11.71  |
|  | NORMAL | 6,920.00   | 1.33       | 177.67     | 6,830.58    | 26.87       | 752.74      | 753.10         | 0.29              | 0.29               | 2.68              | 12.28  |
|  | NORMAL | 7,015.00   | 0.38       | 203.98     | 6,925.57    | 25.48       | 752.66      | 752.99         | 1.06              | -1.00              | 27.69             | 170.34   |
|  | NORMAL | 7,110.00   | 0.13       | 241.90     | 7,020.57    | 25.14       | 752.44      | 752.76         | 0.30              | -0.26              | 39.92             | 163.94   |
| ····                                   | NORMAL | 7,205.00   | 1.06       | 55.40      | 7,115.57    | 25.59       | 753.07      | 753.40         | 1.25              | 0.98               | 182.63            | 174.21   |
| ······································ | NORMAL | 7,300.00   | 1.19       | 74.65      | 7,210.55    | 26.35       | 754.74      | 755.09         | 0.42              | 0.14               | 20.26             | 80.81  |
| 3/4/2011                               | NORMAL | 7,489.00   | 0.31       | 91.90      | 7,399.53    | 26.85       | 757.14      | 757.50         | 0.48              | -0.47              | 9.13              | 174.13   |
|  | NORMAL | 7,584.00   | 0.25       | 135.90     | 7,494.53    | 26.69       | 757.55      | 757.90         | 0.23              | -0.06              | 46.32             | 126.85   |
|  | NORMAL | 7,679.00   | 0.88       | 155.65     | 7,589.52    | 25.88       | 757.99      | 758.33         | 0.68              | 0.66               | 20.79             | 27.21  |
|  | NORMAL | 7,774.00   | 1.13       | 151.53     | 7,684.51    | 24.39       | 758.74      | 759.05         | 0.27              | 0.26               | -4.34             | -18.19   |
| 3/5/2011                               | NORMAL | 7,869.00   | 1.25       | 144.90     | 7,779.49    | 22.72       | 759.78      | 760.06         | 0.19              | 0.13               | -6.98             | -52.27   |
|  | NORMAL | 7,963.00   | 0.63       | 238.90     | 7,873.48    | 21.61       | 759.93      | 760.19         | 1.53              | -0.66              | 100.00            | 154.09   |
| <del></del>                            | NORMAL | 8,058.00   | 0.69       | 186.65     | 7,968.48    | 20.77       | 759.41      | 759.66         | 0.61              | 0.06               | -55.00            | -110.83  |
| <del></del>                            | NORMAL | 8,153.00   | 0.69       | 183.15     | 8,063.47    | 19.64       | 759.32      | 759.54         | 0.04              | 0.00               | -3.68             | -91.75   |
|  | NORMAL | 8,248.00   | 0.94       | 178.78     | 8,158.46    | 18.29       | 759.30      | 759.50         | 0.27              | 0.26               | -4.60             | -16.15   |
|  | NORMAL | 8,343.00   | 1.31       | 166.15     | 8,253.44    | 16.45       | 759.58      | 759.75         | 0.47              | 0.39               | -13.29            | -40.25   |
| ······································ | NORMAL | 8,438.00   | 1.31       | 155.78     | 8,348.42    | 14,41       | 760.28      | 760.42         | 0.25              | 0.00               | -10.92            | -95.18   |
|  | NORMAL | 8,533.00   | 1.69       | 156.53     | 8,443.38    | 12.13       | 761.29      | 761.38         | 0,40              | 0.40               | 0.79              | 3.33   |
| ·····                                  | NORMAL | 8,627.00   | 1.63       | 156.15     | 8,537.34    | 9.64        | 762.38      | 762.43         | 0.06              | -0.06              | -0.40             | -169.79  |
|  | NORMAL | 8,722.00   | 1.75       | 165.03     | 8,632.30    | 7.00        | 763.30      | 763.31         | 0.30              | 0.13               | 9.35              | 69.86  |
| 3/6/2011                               | NORMAL | 9,660.00   | 1.75       | 165.03     | 9,569.86    | -20.67      | 770.70      | 770.22         | 0.00              | 0.00               | 0.00              | 0.00   |
|  | NORMAL | 9,660.00   | 1.75       | 165.03     | 9,569.86    | -20.67      | 770.70      | 770.22         | 0.00              | 0.00               | 0.00              | 0.00   |
|  |        | 13         |            |            | 47          |             |             |                |                   |                    |                   | TOTAL OF THE PARTY |

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JUN 1 6 2011

DIV. OF OIL, GAS & MINING

STATE OF UTAH AMENDED REPORT FORM 8 **DEPARTMENT OF NATURAL RESOURCES** (highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: **UO 1194 ST** 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a. TYPE OF WELL: 7. UNIT or CA AGREEMENT NAME OIL GAS WELL OTHER UTU63047A b. TYPE OF WORK: 8. WELL NAME and NUMBER: DIFF. RESVR. NBU 921-25K4BS WELL 🔽 RE-ENTRY OTHER 2. NAME OF OPERATOR: 9. API NUMBER: KERR MCGEE OIL & GAS ONSHORE, L.P. 4304751257 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10 FIELD AND POOL, OR WILDCAT P.O.BOX 173779 STATE CO ZIP 80217 CITY DENVER (720) 929-6100 NATURAL BUTTES BHL reviewed by HSM 4. LOCATION OF WELL (FOOTAGES) 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: AT SURFACE: NESW 1838 FSL 1400 FWL S25, T9S, R21E NESW 25 9S 21E S AT TOP PRODUCING INTERVAL REPORTED BELOW: NESW 1865 FSL 2158 FWL S25, T9S, R21E 12. COUNTY 13. STATE AT TOTAL DEPTH: NESW 1859 FSL 2171 FWL S25, T9S, R21E UTAH UINTAH 14. DATE SPUDDED: 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): ABANDONED READY TO PRODUCE 🗸 12/17/2010 3/6/2011 5/11/2011 4971 GL 19. PLUG BACK T.D.: MD 9,613 18. TOTAL DEPTH: MD 9,660 21. DEPTH BRIDGE 20. IF MULTIPLE COMPLETIONS, HOW MANY? MD TVD 9,570 TVD 9,523 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) NO 🗸 WAS WELL CORED? YES (Submit analysis) **CBL** WAS DST RUN? NO 🗸 YES (Submit report) DIRECTIONAL SURVEY? NO YES 7 (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER **CEMENT TYPE &** SLURRY HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) BOTTOM (MD) CEMENT TOP \*\* AMOUNT PULLED DEPTH NO. OF SACKS VOLUME (BBL) 20" STL 36.7# 40 28 11" 28# 8 5/8" **IJ-55** 2.651 625 0 7/8" 4 1/2" 1-80 11.6# 9.634 1,501 830 25. TUBING RECORD DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) 2 3/8" 9.054 26. PRODUCING INTERVALS 27. PERFORATION RECORD FORMATION NAME TOP (MD) BOTTOM (MD) TOP (TVD) BOTTOM (TVD) INTERVAL (Top/Bot - MD) SIZE NO. HOLES PERFORATION STATUS (A) MESAVERDE 7.532 9,533 7,532 9,533 0.36 192 Open Squeezed Open Squeezed (C) Open Squeezed (D) Squeezed 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. **DEPTH INTERVAL** AMOUNT AND TYPE OF MATERIAL 7532 - 9533 PUMP 7,284 BBLS SLICK H2O & 158,718 LBS SAND DIV. OF OIL, GAS & MINIA 29. ENCLOSED ATTACHMENTS: 30. WELL STATUS: ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT ✓ DIRECTIONAL SURVEY PROD SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION OTHER: CORE ANALYSIS

| 31. INITIAL PRO                                       | DUCTION              |   |                |            | INTE                                   | ERVAL A (As sho      | wn in item #26)                        |   |                     |            |        |  |
|---|----------------------|---|----------------|------------|--|----------------------|--|---|---------------------|------------|--------|--|
| DATE FIRST PR   | ODUCED:              | TEST DA                                   |                |            | HOURS TESTED                           | );                   | TEST PRODUCTION                        | OIL - BBL:                              | GAS - MCF:          | WATER -    |        | PROD. METHOD:                                |
| 5/11/2011   |                      | 5/16/                                     | 2011           |            | 2                                      | 24                   | RATES: →                               | 0                                       | 2,426               | 48         | 0      | FLOWING                                      |
| сноке size:<br>20/64                                  | TBG. PRESS.<br>1,821 | CSG. PRI<br>3,01                          |                | PI GRAVITY | BTU - GAS                              | GAS/OIL RATIO        | 24 HR PRODUCTION<br>RATES: →           | OIL – BBL:                              | GAS - MCF:<br>2,426 | WATER -    |        | INTERVAL STATUS<br>PROD                      |
|   |                      |   |                |            | INT                                    | ERVAL B (As show     | wn in item #26)                        |   |                     |            |        |  |
| DATE FIRST PR   | ODUCED:              | TEST DA                                   | TE:            |            | HOURS TESTED                           | );                   | TEST PRODUCTION RATES: →               | OIL BBL:                                | GAS MCF:            | WATER      | BBL:   | PROD. METHOD:                                |
| CHOKE SIZE:   | TBG. PRESS.          | C\$G. PRI                                 | ESS. AP        | PI GRAVITY | BTU – GAS                              | GAS/OIL RATIO        | 24 HR PRODUCTION<br>RATES: →           | OIL BBL:                                | GAS - MCF:          | WATER -    | BBL.   | INTERVAL STATUS                              |
|   | 1                    | <b>-</b>                                  | <del> </del>   |            | INTI                                   | ERVAL C (As shor     | wn in item #26)                        |   |                     |            |        | <u>.                                    </u> |
| DATE FIRST PR   | ODUCED:              | TEST DA                                   | TE:            |            | HOURS TESTED                           | ):                   | TEST PRODUCTION RATES: →               | OIL BBL:                                | GAS MCF:            | WATER -    | -BBL:  | PROD. METHOD:                                |
| CHOKE SIZE:   | TBG. PRESS.          | CSG. PRI                                  | ESS. AP        | PI GRAVITY | BTU GAS                                | GAS/OIL RATIO        | 24 HR PRODUCTION<br>RATES: →           | OIL BBL:                                | GAS - MCF:          | WATER -    | BBL:   | INTERVAL STATUS                              |
|   | -                    |   |                |            | INT                                    | ERVAL D (As sho      | wn in item #26)                        |   |                     |            |        |  |
| DATE FIRST PR   | ODUCED:              | TEST DA                                   | TE:            |            | HOURS TESTED                           | ):                   | TEST PRODUCTION RATES: →               | OIL BBL:                                | GAS - MCF:          | WATER -    | BBL:   | PROD. METHOD:                                |
| CHOKE SIZE:   | TBG. PRESS.          | CSG. PR                                   | ESS. AP        | PI GRAVITY | BTU GAS                                | GAS/OIL RATIO        | 24 HR PRODUCTION<br>RATES: →           | OIL – BBL:                              | GAS MCF:            | WATER -    | - BBL: | INTERVAL STATUS                              |
| 32. DISPOSITIO  | N OF GAS (Sol        | d, Used for F                             | uel, Vented    | d, Etc.)   |  | •                    |  |   |                     |            |        | <del> </del>                                 |
| 33. SUMMARY   | OF POROUS ZO         | NES (Includ                               | e Aquifers):   | ):         | ······································ |                      | 3                                      | 4. FORMATION                            | (Log) MARKERS:      |            |        |  |
| Show all importatested, cushion u                     |                      |   |                |            | ils and all drill-stem<br>recoveries.  | tests, including de  | epth interval                          |   |                     |            |        |  |
| Formatio  | on I                 | Top<br>(MD)                               | Bottom<br>(MD) | 1          | Descript                               | tions, Contents, etc | ······································ | *************************************** | Name                |            | 4)     | Top<br>Measured Depth)                       |
| GREEN R<br>BIRD'S NE<br>MAHOGAI<br>WASATCH<br>MESAVER | EST<br>NY<br>H       | 1,490<br>1,786<br>2,191<br>4,810<br>7,519 | 7,519<br>9,660 |            |  |                      |  |   | #<br>4<br>5         | REC<br>JUN |        |  |
|   |                      |   |                |            |  |                      |  |   | DIV                 | OF OIL,    | GAS    | & MINING                                     |
| 35. ADDITIONA Attached                                | ·                    |   |                | ·          | erforation re                          | eport and fi         | nal survey. Co                         | mpletion c                              | hrono details       | s individ  | ual fr | ac stages.                                   |

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLE

TITLE REGULATORY ANALYST

SIGNATURE

DATE 6/7/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

| Well: NBU 92            | 1-25K4BS [YELLO             | W]               | Spud Co  | onductor             | : 12/17/2   | 2010    | Spud Date: 1    | /27/2011  |  |  |
|-------------------------|-----------------------------|------------------|----------|----------------------|-------------|---------|-----------------|---|--|--|
| Project: UTAH           | I-UINTAH                    |                  | Site: NB | U 921-2              | 5K PAD      |         |                 | Rig Name No: H&P 298/298, CAPSTAR 310/310   |  |  |
| Event: DRILLI           | NG                          |                  | Start Da | te: 1/10/            | 2011        |         |                 | End Date: 3/8/2011  |  |  |
| Active Datum:<br>_evel) | RKB @4,997.00ft (           | above Mear       | Sea      | UWI: N               | E/SW/0/     | 9/S/21/ | E/25/0/0/26/PM/ | M/S/1838/W/0/1400/0/0   |  |  |
| Date                    | Time<br>Start-End           | Duration<br>(hr) | Phase    | Code                 | Sub<br>Code | P/U     | MD From (ft)    | Operation   |  |  |
| 1/27/2011               | 16:00 - 17:30               | 1.50             | MIRU     | 01                   | С           | Р       | J               | SKID RIG & RIG UP   |  |  |
|                         | 17:30 - 19:00               | 1.50             | PRPSPD   | 14                   | Α           | P       |                 | WELD ON CONDUCTOR & RU FLOW LINE  |  |  |
|                         | 19:00 - 20:30               | 1.50             | PRPSPD   | 06                   | Α           | P       |                 | PU 11" BIT & 8" MOTOR   |  |  |
|                         | 20:30 - 21:30               | 1.00             | DRLSUR   | 02                   | В           | Р       |                 | SPUD 11" SURFACE HOLE F/40'- 223' // ROP=183<br>FPH // WOB=16/18K // RPM=55/96 // SPP= 850/670<br>// GPM= 600   |  |  |
|                         | 21:30 - 23:00               | 1.50             | DRLSUR   | 06                   | Α           | Р       |                 | TOOH & PU DIR TOOLS   |  |  |
| 1/28/2011               | 23:00 - 0:00<br>0:00 - 6:00 | 1.00<br>6.00     | DRLSUR   | 02                   | D<br>D      | Р       |                 | DI R DRLG 11" SURFACE HOLE F/ 223'-330' // ROP= 107 FPH // WOB=18-22K // RPM= 55/96 // SPP= 880/650 // GPM=600 // LAST SURVEY @ 297'= 3.08 DEG- 84.97 AZ  |  |  |
| 1/28/2011               | 6:00 - 8:00                 | 2.00             | DRLSUR   | 02                   | D           | P<br>P  |                 | DI R DRLG 11" SURFACE HOLE F/ 330'-1085' // ROP= 126 FPH // WOB=18-22K // RPM= 55/96 // SPP= 880/650 // GPM=600 // LAST SURVEY @ 962'=11.88 DEG- 85.04 AZ // NO LOSSES  |  |  |
|                         | ,                           |                  |          |                      |             |         |                 | DI R DRLG 11" SURFACE HOLE F/ 1085'-1278' //<br>ROP= 97 FPH // WOB=18-22K // RPM= 55/96 //<br>SPP= 880/650 // GPM=600   |  |  |
|                         | 8:00 - 9:00                 | 1.00             | DRLSUR   | 07                   | Α           | Р       |                 | SERVICE RIG & EQUIPMENT   |  |  |
|                         | 9:00 - 18:00                | 9.00             | DRLSUR   | 02                   | D           | Р       |                 | DI R DRLG 11" SURFACE HOLE F/ 1278'- 1939' // ROP= 73 FPH // WOB=18-22K // RPM= 55/96 // SPP= 1050/850 // GPM=600   |  |  |
|                         | 18:00 - 0:00                | 6.00             | DRLSUR   | 02                   | D           | Р       |                 | DI R DRLG 11" SURFACE HOLE F/ 1939'-2382' // ROP= 74 FPH // WOB=18-22K // RPM= 55/96 // SPP= 1200/1050 // GPM=600 // 85% RETURNS // LAST SURVEY @2291'=17.56 DEG- 85.16 AZ  |  |  |
| 1/29/2011               | •                           |                  | CSG      |                      |             |         |                 | SPUD DATE/TIME: 1/27/2011 20:30   |  |  |
|                         |                             |                  |          | Strate of the second | REC<br>JUN  |         |                 | SURFACE HOLE: Surface From depth: 40 Surface To depth: 2,655 Total SURFACE hours: 30.00 Surface Casing size: 8 5/8 # of casing joints ran: 59 Casing set MD: 2,633.0  |  |  |
|                         |                             |                  |          | DIV. (               | OF OIL,     | GAS &   | MINING          | # sx of cement: 200/225/200 Cement blend (ppg:) 11.0/15.8/15.8 Cement yield (ft3/sk): 3.83/1.15/1.15 # of bbls to surface: 0 Describe cement issues: NO CMT TO SURFACE  |  |  |
|                         | 0:00 - 5:00                 | 5.00             | DRLSUR   | 02                   | D           | Р       |                 | Describe hole issues: 70% RETURNS F/ 2000' - 2655  DI R DRLG 11" SURFACE HOLE F/ 2382'-2655' // ROP= 61 FPH // WOB=18-22K // RPM= 55/96 // SPP= 1200/1050 // GPM=600 // 75% RETURNS // LAST SURVEY@ 2595'= 16.15 DEG-82.15 AZ // 9' HIGH & 3' FIGHT OF LINE // 92.3% ROTATE- 7.7% SLIDE |  |  |
|                         | 5:00 - 5:30                 | 0.50             | DRLSUR   | 05                   | Α           | Р       |                 | CIRC & COND HOLE FOR 8.625" CSG   |  |  |
|                         | 5:30 - 9:00                 | 3.50             | DRLSUR   | 06                   | Α           | Ρ       |                 | LD DRILL STRING & DIR TOOLS   |  |  |
|                         | 9:00 - 12:30                | 3.50             | CSG      | 12                   | С           | P       |                 | PJSM // RUN 59 JT'S, 8-5/8", 28#, J-55, LT&C CSG<br>SHOE SET @ 2633' // BAFFLE @ 2586'  |  |  |

| Well: NBU 921           | -25K4BS [YELLO                 | <b>/</b> /]      | Spud Co    | onductor  | : 12/17/:   | 2010                             | Spud Date: 1/27/2011   |
|-------------------------|--------------------------------|------------------|------------|-----------|-------------|----------------------------------|--|
| Project: UTAH-          | -UINTAH                        |                  | Site: NB   | U 921-2   | 5K PAD      |                                  | Rig Name No: H&P 298/298, CAPSTAR 310/310  |
| Event: DRILLIN          | NG                             |                  | Start Da   | te: 1/10/ | 2011        |                                  | End Date: 3/8/2011   |
| Active Datum:<br>Level) | above Mean                     | Sea              | UWI: N     | IE/SW/0   | /9/S/21/E/  | 25/0/0/26/PM/S/1838/W/0/1400/0/0 |  |
| Date                    | Time<br>Start-End              | Duration<br>(hr) | Phase      | Code      | Sub<br>Code | P/U                              | MD From Operation (ft)   |
|                         | 12:30 - 15:00                  | 2.50             | CSG        | 12        | E           | Р                                | PJSM // TEST LINES TO 2500 PSI // PUMP 25 BBL SPACER // LEAD= 200 SX CLASS G CMT (YIELD=3.83 CUFT/SK, WT= 11.0 PPG) // TAIL=225 SX CLASS G CMT (YIELD= 1.15 CUFT/SK, WT= 15.8 PPG) // DROP PLUG & DISPLACE W/ 163 BBL'S WATER // PLUG DN @ 14:46 01/29/20011 // NO CMT TO SURFACE // BUMP PLUG @ 500 PSI // FINAL LIFT = 200 PSI // CKECK FLOATS- HELD W5 BBL BACK |
|                         | 15:30 - 15:30<br>15:30 - 16:00 | 0.50<br>0.50     | CSG<br>CSG | 14<br>12  | A<br>E      | P<br>P                           | CUT OFF CONDUCTOR & HANG 8.625" CSG PUMP 1" TOP OUT W/ 200 SX CLASS G CMT @ 1.15 YIELG & 15.8 WT // NO CMT TO SURFACE // WILL TOP OUT WHEN OUT TO DO NEXT JOB // RELEASE RIG @ 16:00 1/29/2011   |
| 2/28/2011               | 18:00 - 19:00                  | 1.00             | MIRU       | 01        | С           | Р                                | SKID RIG TO NBU 921-25K4BS   |
|                         | 19:00 - 21:00                  | 2.00             | MIRU       | 01        | С           | Р                                | CENTER RIG OVER WELL   |
|                         | 21:00 - 23:00                  | 2.00             | MIRU       | 14        | Α           | Р                                | LOCK DOWN BOP STACK / NIPPLE UP/CHANGE<br>OUT BAILS & ELEVATORS/FINISH RIGGING UP<br>FLOW LINE,MUD LINE  |
|                         | 23:00 - 0:00                   | 1.00             | MIRU       | 15        | Α           | Р                                | RU & TEST BOPS   |

RECEIVED

PRESSURE TEST PIPE RAMS, BLIND RAMS,

CASING 1500 F/ 30 MIN

INSTALL WEAR BUSHING

PRE SPUD INSPECTION

DERRICK FOR LEVEL-OK-

TO 2672'

DRILLED

DRILLED

**RIG SERVICE** 

TRIP IN HOLE TAG CEMENT @ 2517'

FLOOR VALVE, KILL LINES & KILL LINE VALVES, BOP WING VALVES, HCR VALVE + CHOKE LINE; INNER AND OUTER CHOKE VALVES & MANIFOLD TO 250 PSI LOW @ 5 MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2500 PSI HIGH @ 10 MINUTES /

PICK UP M MTR,BIT,DIRECT TOOLS,SCRIBE &

SURFACE TEST/ TRIP IN HOLE W/ HWDP/ CHECK

DRILL FLOAT TRAC SHOE @ 2643 OPEN HOLE

DRILL/ ROT / SLIDE F/ 2672-3750=1078'=154 FPH / WOB 15K-18K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 1720/1400 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 120/94/108 / TORQUE ON/OFF BOTTOM 6K/3K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER./ SLIDE 56' IN .50 MIN = 12% OF FOOTAGE DRILLED & 5% OF HRS

DRILL/ ROT / SLIDE F/ 3750-5075=1325'=155.8 FPH

/ WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 1800/1550 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 127/107/115/ TORQUE ON/OFF BOTTOM 8K/3K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER./ SLIDE 46' IN .48 MIN = 3.5% OF FOOTAGE DRILLED &9.4% OF HRS

JUN 16 2011

DIV. OF OIL, GAS & MINING

3/1/2011

3.50

0.50

0.50

1.50

1.00

1.00

7.00

0.50

8.50

**PRPSPD** 

**PRPSPD** 

PRPSPD

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PRPSPD

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- 8:00

8:00 - 15:00

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15:30 - 0:00

4:00

4:30

6:00

7:00

# **Operation Summary Report**

|               | 1-25K4BS [YELLOV           | V]               | <del> </del> |         | r: 12/17/2  | 010     | Spud Date: 1/27/2011  |
|---------------|----------------------------|------------------|--------------|---------|-------------|---------|---|
| Project: UTAH | I-UINTAH                   |                  | Site: NB     | U 921-2 | 25K PAD     |         | Rig Name No: H&P 298/298, CAPSTAR 310/310   |
| Event: DRILLI | NG                         |                  | Start Da     | .,      |             |         | End Date: 3/8/2011  |
| Level)        | RKB @4,997.00ft (a         | above Mea        | n Sea        | UWI: N  | NE/SW/0/    | 9/S/21/ | /E/25/0/0/26/PM/S/1838/W/0/1400/0/0   |
| Date          | Time<br>Start-End          | Duration<br>(hr) | Phase        | Code    | Sub<br>Code | P/U     | MD From Operation (ft)  |
| 3/2/2011      | 0:00 - 6:00<br>6:00 - 7:30 | 1.50             | DRLPRO       | 02      | D<br>D      | P       | DRILL/ ROT / SLIDE F/ 5075-5775=700=116.6 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1700 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 146/112/133/ TORQUE ON/OFF BOTTOM 9K/5K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER J/ SLIDE 5' IN .7 MIN = .07% OF FOOTAGE DRILLED &1.9% OF HRS DRILLED DRILL/ ROT / SLIDE F/ 5,775'-5,928'=153'=102 FPH |
|               |                            |                  |              |         |             |         | / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 124 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1700 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 158/120/135/ TORQUE ON/OFF BOTTOM 9K/5K / H2O + POLYMER W/ WEIGHTED SWEEPS +/- 2 PPG OVER./ SLIDE 0' IN 0 MIN = 0% OF FOOTAGE DRILLED & 0% OF HRS DRILLED   |
|               | 7:30 - 11:30               | 4.00             | DRLPRO       | 22      | G           | Х       | LOST TOTAL RETURNS @ 5,928'/ ATTEMPT TO REGAIN CIRC / PULL 5 STDS / MIX & PUMP LCM REGAIN CIRC / TIH / 500 BBL LOSS   |
|               | 11:30 - 15:30              | 4.00             | DRLPRO       | 02      | D           | Р       | DRILL/ ROT / SLIDE F/ 5,928'-6,127'=199'=50' FPH / WOB 18K-20K / TOP DRIVE RPM 35-50 / PUMP 80/90 SPM = 360/405 GPM / PUMP PRESSURE ON/OFF BOTTOM 1800/1600 PSI / MUD MOTOR RPM 85 / PU/SO/ROT WT 165/132/140 / TORQUE ON/OFF BOTTOM 9K/5K HOLE STILL SEEPING BEGIN MUD UP & RAISE LCM CONTENT TO 20 % LOSS 75 BBL  |
|               | 15:30 - 17:00              | 1.50             | DRLPRO       | 06      | G           | Z       | LOOSING PUMP PRESSURE / CHECK SURFACE<br>EQUIPMENT / TOOH F/ 6,127' TO 5,320' / L/D<br>WASHED OUT JT ( 9 STDS & DOUBLE/ 807' FROM<br>RKB OR 5,320' FROM BIT) WASHED IN SLIP AREA  |
|               | 17:00 - 0:00               | 7.00             | DRLPRO       | 02      | D           | P       | DRILL/ ROT / SLIDE F/ 6,127' TO 6,565' 438'=62.57 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2000/1700 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 165/132/139/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 16' IN 20 MIN =3% OF FOOTAGE DRILLED & 3 % OF HRS DRILLED / 9.4 MUD WT 35 VIS / 20% LCM / NO MUD LOSS / BOP DRILL                                       |
| 3/3/2011      | 0:00 - 12:30               | 12.50            | DRLPRO       | 02      | D           | P       | DRILL/ ROT / SLIDE F/ 6,565' TO 7,078' = 513'= 41.04 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2050/1750 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 165/136/152/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 22' IN 80 MIN =4% OF FOOTAGE DRILLED & 10 % OF HRS DRILLED / 9.9 MUD WT 45 VIS / 18% LCM / NO MUD LOSS   |
|               | 12:30 - 15:00              | 2.50             | DRLPRO       | 22      | G           | Х       | LOOSING RETURNS BUILD VOLUME & RAISE<br>LCM CONTENT 300 BBL MUD LOSE  |
|               | 15:00 - 0:00               | 9.00             | DRLPRO       | 02      | D           | P       | DRILL/ ROT / SLIDE F/ 7,078' TO 7,349' 271'= 30.11 FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2075/1750 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 175/140/155/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 23' IN 110 MIN =8% OF FOOTAGE DRILLED & 6 % OF HRS DRILLED / 10.4 MUD WT 46 VIS / 22% LCM / NO MUD LOSS  |

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JUN 16 2011

# **Operation Summary Report**

 Well: NBU 921-25K4BS [YELLOW]
 Spud Conductor: 12/17/2010
 Spud Date: 1/27/2011

 Project: UTAH-UINTAH
 Site: NBU 921-25K PAD
 Rig Name No: H&P 298/298, CAPSTAR 310/310

 Event: DRILLING
 Start Date: 1/10/2011
 End Date: 3/8/2011

Active Datum: RKB @4,997.00ft (above Mean Sea

UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0

| evel)    |       |                 |                  |        |      |             |     |                 |  |
|----------|-------|-----------------|------------------|--------|------|-------------|-----|-----------------|--|
| Date     |       | Time<br>art-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(ft) | Operation  |
| 3/4/2011 |       | - 15:30         | 15.50            | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 7,349' TO 7,828' =479'= 30.90 FPH / WOB 18K-20K / TOP DRIVE RPM 35-6 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2075/1800 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 190/145/162/ TORQUE ON/OFF BOTTOM 8K/5K / SLIDE 20' IN 90 MIN = 4% OF FOOTAGE DRILLED & 9 % OF HRS DRILLED / 10.6 MUD WT 46 VIS / 22% LCM / NO MUD LOSS |
|          |       | - 16:00         | 0.50             | DRLPRO | 07   | Α           | Р   |                 | SERVICE RIG @ 7,828'   |
|          |       | - 16:30         | 0.50             | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 7,828' TO 7,850' =22'= 44' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2075/1800 PSI / MUD MOTOR RPM 115 / PU/SO/ROT WT 190/145/162/ TORQUE ON/OFF BOTTOM 8K/5K/ BOP DRILL  |
|          | 16:30 | - 17:30         | 1.00             | DRLPRO | 05   | С           | Р   |                 | CIRC BTMS UP @ 7,850'  |
|          | 17:30 | - 21:00         | 3.50             | DRLPRO | 06   | Α           | Р   |                 | TOOH F/ BIT & MTR F/ 7,850' TO BIT W/ NO<br>PROBLEMS / CHECK LEVEL ON DRK & IF PIPE IS<br>CENTER OF HOLE-OK / FUNCTION BOP'S   |
|          | 21:00 | - 21:30         | 0.50             | DRLPRO | 06   | Α           | P   |                 | MU BIT & MTR ORIENTATE & SCRIBE SAME   |
|          | 21:30 | - 0:00          | 2.50             | DRLPRO | 06   | Α           | Р   |                 | TIH W/ BIT & BHA # 2 TO 5,100' FILL @ SHOE & 5,000' W/ NO PROBLEMS   |
| 3/5/2011 |       | - 1:00          | 1.00             | DRLPRO | 06   | Α           | P   |                 | TIH F/ 5,100' TO 7,700' WASH TO BTM @ 7,850' W<br>NO PROBLEMS  |
|          | 1:00  | - 13:00         | 12.00            | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 7,850' TO 8,430' =580'= 48.33' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2320/2150 PSI / MUD MOTOR RPM 79/ PU/SO/ROT WT 195/145/165/ TORQUE ON/OFF BOTTOM 8K/5K/ MUD WT 11.4 / VIS 46 / LCM 22% NO MUD LOSE   |
|          |       | - 15:30         | 2.50             | DRLPRO | 22   | G           | Р   |                 | LOST TOTAL RETURNS /REGAIN PARTIAL<br>RETURNS BUILD VOLUME & RAISE LCM<br>CONTENT TO 30% / 350 BBL LOSE  |
|          |       | - 17:00         | 1.50             | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 8,430' TO 8,493' =63'= 42' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1975 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 195/145/165/ TORQUE ON/OFF BOTTOM 8K/9K/ MUD WT 11.5 / VIS 46 / LCM 30%  |
|          |       | - 17:30         | 0.50             | DRLPRO | 07   | Α           | P   |                 | SERVICE RIG @ 8,493' / BOP DRILL   |
|          | 17:30 | - 0:00          | 6.50             | DRLPRO | 02   | D           | Р   |                 | DRILL/ ROT / SLIDE F/ 8,493' TO 8,778' =285'= 43.85' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1975 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 197/145/170/ TORQUE ON/OFF BOTTOM 8K/9K/   |

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MUD LOSE 110 BBL

MUD WT 11.8 / VIS 48 / LCM 30% / MUD LOSE 110

DRILL/ ROT F/8,778' TO 8,961' =183'= 43.85' FPH / WOB 18K-20K / TOP DRIVE RPM 35-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2150/1975 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 197/145/170/ TORQUE ON/OFF BOTTOM 8K/9K/ MUD WT 11.8 / VIS 48 / LCM 30% /

JUN 16 2011

3/6/2011

0:00 - 6:00

6.00

DRLPRO

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# **Operation Summary Report**

 Well: NBU 921-25K4BS [YELLOW]
 Spud Conductor: 12/17/2010
 Spud Date: 1/27/2011

 Project: UTAH-UINTAH
 Site: NBU 921-25K PAD
 Rig Name No: H&P 298/298, CAPSTAR 310/310

 Event: DRILLING
 Start Date: 1/10/2011
 End Date: 3/8/2011

Active Datum: RKB @4,997.00ft (above Mean Sea

UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0

| rel)     | · · · · · · · · · · · · · · · · · · · | ·                  |                  |                  |          |             |        |  |
|----------|---------------------------------------|--------------------|------------------|------------------|----------|-------------|--------|--|
| Date     | 1                                     | Time<br>art-End    | Duration<br>(hr) | Phase            | Code     | Sub<br>Code | P/U    | MD From Operation (ft)   |
|          | 6:00                                  | - 22:00            | 16.00            | DRLPRO           | 02       | D           | Р      | DRILL/ ROT F/ 8,961' TO 9,660' TD =699'= 43.18' FPH / WOB 18K-20K / TOP DRIVE RPM 40-60 / PUMP 95 SPM = 428 GPM / PUMP PRESSURE ON/OFF BOTTOM 2100/1800 PSI / MUD MOTOR RPM 68/ PU/SO/ROT WT 215/155/185/ TORQUE ON/OFF BOTTOM 8K/9K/ MUD WT 12.2 / VIS 48 / LCM 30% / MUD LOSE 200 BBL  |
|          | 22:00                                 | - 23:00            | 1.00             | DRLPRO           | 05       | С           | Р      | CIRC BTM'S UP @9,660' / 3/10 MUD CUT NO<br>FLARE / 40 BBL MUD LOSE   |
|          |                                       | - 0:00             | 1.00             | DRLPRO           | 06       | E           | P      | WIPER TRIP TO 7,800'   |
| 3/7/2011 | 0:00                                  | - 1:30             | 1.50             | DRLPRO           | 06       | Ε           | Р      | WIPER TRIP / TIH F/ 7,800' TO 9,660'   |
|          |                                       | - 3:30             | 2.00             | DRLPRO           | 05       | С           | Р      | CIRC HOLE CLEAN @ 9,660' 150 BBL MUD LOS<br>150 BBL MUD LOSE   |
|          |                                       | - 8:00             | 4.50             | DRLPRO           | 06       | Α           | P      | TOOH TO SHOE @ 2,650'  |
|          |                                       | - 13:30            | 5.50             | DRLPRO           | 05       | F           | P      | CIRC OUT LCM CONTENT TO RUN 40 POINT<br>CALIPER LOG F/ 30% TO 2% / MEAN WHILE CI<br>& SLIP 117' DRILL LINE / 150 BBL MUD LOSE  |
|          |                                       | - 15:00            | 1.50             | DRLPRO           | 06       | Α           | Р      | TOOH TO RUN CALIPER LOG ON 8 5/8 CSG   |
|          |                                       | - 18:00<br>- 18:30 | 3.00<br>0.50     | DRLPRO<br>DRLPRO | 11<br>14 | E<br>B      | P<br>P | PJSM RUN 40 POINT CALIPER LOG IN 8 5/8 CS<br>F/250' TO SURFACE<br>PULL WEAR BUSHING  |
|          |                                       | - 20:30            |                  |                  |          |             | P      |  |
|          |                                       | - 0:00             | 2.00             | DRLPRO           | 12       | A<br>C      | P      | PJSM RU WEATHERFORD CSG EQUIPMENT  |
| 0/0/0044 |                                       |                    | 3.50             | DRLPRO           | 12       |             | •      | RUN 61 JTS OF 4 1/2" 11.60 I-80 CSG TO 2,520'  |
| 3/8/2011 |                                       | - 4:00             | 4.00             | COMP             | 12       | С           | P      | RUN 4 1/2" CSG F/ 2,520' TO 9,615' TOTAL JTS<br>RAN 232  |
|          |                                       | - 6:00             | 2.00             | COMP             | 12       | С           | S      | WASH CSG DOWN F/ 9,615' TO 9,634' UNABLE<br>WASH TO ORIGINAL CSG SETTING DEPTH OF<br>9,654' ( SHOE @ 9,634' / FLOAT COLLAR @ 9,60<br>M VERDE MARKER @ 7,527' / WASATCH MARK<br>@ 4,856'  |
|          | 6:00                                  | - 11:00            | 5.00             | COMP             | 12       | E           | P      | HSM RU BJ / TEST PUMPS & LINES TO 5000 PS PUMP 40 BBLS H2O + 480 SX LEAD CEMENT @ 12.5 ppg (PREM LITE II ) 134.95 BBLS FRESH WATER / (11.79 gal/sx, 2.17 yield) + 1021 SX TAI @ 14.3 ppg (CLS G 50/50 POZ 143.47 BBLS H2C (5.90 gal/sx, 1.31 yield) / DROP PLUG & DISPLAC W/ 149 BBLS H2O + ADDITIVES / PLUG DOWN (10:21 LIFT PRESSURE @ 2700 PSI BUMP PRESSURE @3200 W/ 5 BBLCMT BACK TO PIT LAST 10 BBLS LOST RETURNS/ FLOATS HELD W/ 1.5 BBLS H2O RETURNED TO INVENTORY / TOP OF TAIL CEMENT CALCULATED @ 4340', I MO CMT EQUIP |
|          | 11:00                                 | - 12:30            | 1.50             | COMP             | 14       | Α           | Р      | P/U BOP'S SET SLIPS WITH WETHERFORD /  |

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ND BOP'S RELEASE RIG @ 13:00 HRS 3/8/11

JUN 16 2011

DIV. OF OIL, GAS & MINING

12:30 - 13:00

0.50

COMP

14

Α

#### **US ROCKIES REGION Operation Summary Report** Spud Date: 1/27/2011 Well: NBU 921-25K4BS [YELLOW] Spud Conductor: 12/17/2010 Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: H&P 298/298, CAPSTAR 310/310 **Event: DRILLING** Start Date: 1/10/2011 End Date: 3/8/2011 Active Datum: RKB @4,997.00ft (above Mean Sea UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0 Level) P/U MD From Date Time Duration Phase Sub Operation Start-End Code (hr) (ft) 13:00 - 13:00 0.00 COMP CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28 SPUD DATE/TIME: 1/27/2011 20:30:00 AM SURFACE HOLE: Surface From depth: Surface To depth: 2,655 Total SURFACE hours: 30.00 Surface Casing size: 8 5/8 # of casing joints ran: 59 Casing set MD: 2,633.0 200/225/200 # sx of cement: Cement blend (ppg:) 11/15.8/15.8 Cement yield (ft3/sk): 3.83/1.15/1.15 # of bbls to surface: NONE Describe cement issues: NO CMT TO SURFACE 70% RETURNS F/2000-Describe hole issues: 2655 PRODUCTION: Rig Move/Skid start date/time: 2/28/2011 18:00 Rig Move/Skid finish date/time: 2/28/2011 19:00 Total MOVE hours: 1.0 Prod Rig Spud date/time: 3/1/2011 7:00 Rig Release date/time: 3/8/2011 13:00 Total SPUD to RR hours: 174.0 Planned depth MD 9734 Planned depth TVD 9643 Actual MD: 9.660 Actual TVD: 9,570 Open Wells \$: AFE \$: Open wells \$/ft: PRODUCTION HOLE: Prod. From depth: 2.672 Prod. To depth: 9,660 Total PROD hours: 113.5 Log Depth: 250 Production Casing size: 4 1/2 # of casing joints ran: 9.634.0 Casing set MD: # sx of cement: 480 / 1021 Cement blend (ppg:) 12.2 / 14.3 Cement yield (ft3/sk): 2.17 / 1.31 Est. TOC (Lead & Tail) or 2 Stage: 4340 / 0 Describe cement issues: 5 BBLCMT BACK 1 1/2 **BBL WATER BACK TO INVENTORY** 2000 BBL MUD LOSE Describe hole issues: DIRECTIONAL INFO: DIRECTIONAL

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2.68 / 391

KOP:

Max angle:

Departure:

Max dogleg MD:

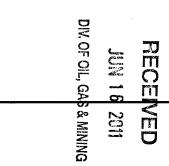
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JUN 16 2011

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# 1.1 Customer Information

General

| Company        | US ROCKIES REGION |
|----------------|-------------------|
| Representative |                   |
| Address        |                   |

# 1.2 Well Information

| Well         | NBU 921-25K4BS [YELLOW]                 |              |  |
|--------------|---|--------------|--|
| Common Name  | NBU 921-25K4BS                          |              |  |
| Well Name    | NBU 921-25K4BS                          | Wellbore No. | ОН                                     |
| Report No.   | 1                                       | Report Date  | 4/29/2011                              |
| Project      | UTAH-UINTAH                             | Site         | NBU 921-25K PAD                        |
| Rig Name/No. |   | Event        | COMPLETION                             |
| Start Date   | 4/29/2011                               | End Date     | 5/11/2011                              |
| Spud Date    | 1/27/2011                               | Active Datum | RKB @4,997.00ft (above Mean Sea Level) |
| UWI          | NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/ | /0/1400/0/0  |  |

# 1.3 General

| Contractor          | CASEDHOLE SOLUTIONS | Job Method      | PERFORATE | Supervisor | DAVE DANIELS |
|---------------------|---------------------|-----------------|-----------|------------|--------------|
| Perforated Assembly | PRODUCTION CASING   | Conveyed Method | WIRELINE  | ·          |              |

# 1.4 Initial Conditions

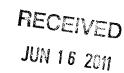
# 1.5 Summary

| Fluid Type               | ·       | Fluid Density      | Gross Interval   | 7,532.0 (ft)-9,533.0 (ft) | Start Date/Time          | 5/2/2011 | 12:00AM    |
|--------------------------|---------|--------------------|------------------|---------------------------|--------------------------|----------|------------|
| Surface Press            |         | Estimate Res Press | No. of intervals | 28                        | End Date/Time            | 5/2/2011 | 12:00AM    |
| TVD Fluid Top            |         | Fluid Head         | Total Shots      | 192                       | Net Perforation Interval |          | 55.00 (ft) |
| <b>Hydrostatic Press</b> |         | Press Difference   | Avg Shot Density | 3.49 (shot/ft)            | Final Surface Pressure   |          |            |
| Balance Cond             | NEUTRAL |                    |                  |                           | Final Press Date         |          |            |

# 2 Intervals

# 2.1 Perforated Interval

| Date Formation/   | CCL@ | CCL-T | MD Top  | MD Base | Shot      | Misfires/ | Diamete  | Carr Type /Carr Manuf | Carr  | Phasing | Charge Desc /Charge | Charge | Reason    | Misrun |
|-------------------|------|-------|---------|---------|-----------|-----------|--|-----------------------|-------|---------|---------------------|--------|-----------|--------|
| Reservoir         | (ft) | S     | (ft)    | (ft)    | Density   | Add. Shot | r  |                       | Size  | (°)     | Manufacturer        | Weight |           |        |
|                   |      | (ft)  |         |         | (shot/ft) |           | (in)   |                       | (in)  |         |                     | (gram) |           |        |
| 12:00AMMESAVERDE/ |      |       | 7,532.0 | 7,534.0 | 4.00      |           | 0.360  | EXP/                  | 3.375 | 90.00   |                     | 23.00  | PRODUCTIO |        |
|                   |      |       | *       |         |           |           | of the state of th |                       |       | ,<br>,  | 1                   |        | N         | -      |



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# 2.1 Perforated Interval (Continued)

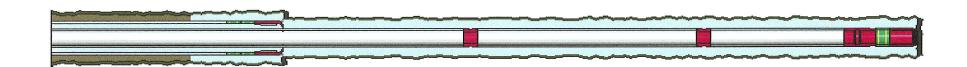
| Date    | Formation/<br>Reservoir | CCL@<br>(ft)   | CCL-T<br>S<br>(ft)   | MD Top<br>(ft) | (ft)    | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diamete<br>r<br>(in) | Carr Type /Carr Manuf | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer                        | Charge<br>Weight<br>(gram) | Reason         | Misrun   |
|---------|-------------------------|--|--|----------------|---------|------------------------------|------------------------|----------------------|-----------------------|----------------------|----------------|--|----------------------------|----------------|--|
| 12:00AM | MESAVERDE/              | 1  |  | 7,567.0        | 7,569.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO<br>N | e dinasa a sika  |
| 12:00AM | MESAVERDE/              |  |  | 7,600.0        | 7,602.0 | 4.00                         | W - V - 1515           | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              |  |  | 7,646.0        | 7,647.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          | and the second second second second second                 |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 7,671.0        | 7,673.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              |  | 1  | 7,708.0        | 7,710.0 | 3.00                         | 1.00                   | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              |  |  | 7,756.0        | 7,757.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO      |  |
| 12:00AM | MESAVERDE/              | and the second s |  | 7,777.0        | 7,779.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  | 4  | 7,924.0        | 7,927.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODÚCTIO<br>N | Company of the compan |
| 12:00AM | MESAVERDE/              |  |  | 7,957.0        | 7,958.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          | u <del>-</del> <del>-</del> .                              | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | en de la constante de la const |  | 8,110.0        | 8,114.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 8,206.0        | 8,208.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | Constitution of the Consti | 2  | 8,243.0        | 8,245.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          | an e e e e   |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | on a second  |  | 8,338.0        | 8,340.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | The state of the s |  | 8,485.0        | 8,487.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 90.00          |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 8,558.0        | 8,560.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | 400 100 100 100 100 100 100 100 100 100  |  | 8,618.0        | 8,620.0 | 4.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | 1000   | 1  | 8,884.0        | 8,886.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | A CONTRACTOR OF THE CONTRACTOR |  | 8,915.0        | 8,917.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         | e e alem o de estado e e e e e e e e e e e e e e e e e e e | and the second second      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  |  | 8,941.0        | 8,943.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              |  | The second decrease of | 9,017.0        | 9,019.0 | 3.00                         | and the second         | 0.360                | EXP/                  | 3.375                | 120.00         |  |                            | PRODUCTIO<br>N |  |
| 12:00AM | MESAVERDE/              | erry consense in the season  | The Albanda Company of | 9,088.0        | 9,090.0 | 3.00                         |                        | 0.360                | EXP/                  | 3.375                | 120.00         |  | 23.00                      | PRODUCTIO<br>N |  |

# 2.1 Perforated Interval (Continued)

| Date     | Formation/ |  | THE STREET WAS ASSESSED. |         | MD Base |                      |  |           | Carr Type /Carr Manuf |              | Phasing | Charge Desc /Charge | Charge           | Reason         | Misrun                  |
|----------|------------|--|--------------------------|---------|---------|----------------------|--|-----------|-----------------------|--------------|---------|---------------------|------------------|----------------|-------------------------|
|          | Reservoir  | (ft)   | S<br>(ft)                | (ft)    |         | Density<br>(shot/ft) | Add. Shot  | r<br>(in) |                       | Size<br>(in) | (°)     | Manufacturer        | Weight<br>(gram) |                |                         |
| 12:00AM  | MESAVERDE/ |  |                          | 9,140.0 | 9,142.0 | 3.00                 |  | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N | Property and the second |
| 12:00AMN | MESAVERDE/ |  |                          | 9,216.0 | 9,217.0 | 4.00                 |  | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMN | MESAVERDE/ |  |                          | 9,282.0 | 9,284.0 | 4.00                 | NO PROVINCE A TOTAL PROVINCE AND A TOTAL PROVINCE A | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMM | MESAVERDE/ |  |                          | 9,357.0 | 9,359.0 | 4.00                 | elandes (interior per la metro de la m   | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMM | MESAVERDE/ |  |                          | 9,398.0 | 9,400.0 | 4.00                 |  | 0.360     | EXP/                  | 3.375        | 120.00  |                     | 23.00            | PRODUCTIO<br>N |                         |
| 12:00AMM | MESAVERDE/ | The state of the s |                          | 9,531.0 | 9,533.0 | 4.00                 | izan Miniar in Norwei zo two mienie zobe Mi  | 0.360     | EXP/                  | 3.375        | 90.00   |                     | 23.00            | PRODUCTIO<br>N |                         |

# 3 Plots

# 3.1 Wellbore Schematic





# **Operation Summary Report**

| Well: NBU 921-25K4BS [YELLOW]          | Spud Conductor    | r: 12/17/2010  | Spud Date: 1/27/2011                         |
|--|-------------------|----------------|--|
| Project: UTAH-UINTAH                   | Site: NBU 921-2   | 5K PAD         | Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3 |
| Event: COMPLETION                      | Start Date: 4/29/ | 2011           | End Date: 5/11/2011                          |
| Active Datum: RKB @4 997 00ft (above M | ean Sea LIWI: N   | JE/SW/0/9/S/21 | /F/25/0/0/26/PM/S/1838/W/0/1400/0/0          |

Level)

| "е | vel)      |      |                 |                  |       |      |             |     |  |
|----|-----------|------|-----------------|------------------|-------|------|-------------|-----|--|
|    | Date      |      | Time<br>art-End | Duration<br>(hr) | Phase | Code | Sub<br>Code | P/U | MD From Operation (ft)   |
|    | 4/29/2011 | 7:00 | - 16:00         | 9.00             | COMP  | 47   | В           | P   | HSM, PRESSURE TESTING, MIRU B&C TESTERS, PRESSURE UP TO 1,000# W/ 10# LOSS IN 15 MIN. BUMP UP TO 3,500# W/ 33# LOSS IN 15 MIN. BUMP UP TO 7000# W/ 95# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 70# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 55# LOSS IN 30 MIN. BUMP BACK UP TO 7,000# W/ 55# LOSS IN 30 MIN. [GOOD TEST] |
|    | 5/2/2011  | 6:15 | - 6:30          | 0.25             | COMP  | 48   |             | P   | HSM, RIGGING UP  |
|    |           | 6:30 | - 6:30          | 0.00             | COMP  | 36   | E           | Р   | MIRU CASED HOLE SOLUTIONS & SUPERIOR FRAC EQUIP.,  |

P/U RIH PERF MESAVERDE W/ 3-1/8 EXPEND, 23 GRM 0.36" HOLE, 9,357'-9,533' [24 HOLES] AS PERSAY IN PROCEDURE.

FRAC STG #1] WHP=1,205#, BRK DN PERFS=3,121#, @=4.6 BPM, INJ RT=50, INJ PSI=6,010#, ISIP=2,686#, FG=.72, PUMP'D 926 BBLS SLK WTR W/ 9,791# 30/50 MESH W/ 4,693# RESIN COAT IN TAIL W/ 14,484# TOTAL PROP PUMP'D, ISIP=2,881#, FG=.74, AR=49.3, AP=5,851#, MR=50.8, MP=6,649#, NPI=195#, 21/24 CALC PERFS OPEN. 87%

PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9.314', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 9,088'-9,284' [24 HOLES] AS PERSAY I PROCEDURE.

FRAC STG #2] WHP=2,570#, BRK DN PERFS=3,636#, @=4.7 BPM, INJ RT=43.3, INJ PSI=5,472#, ISIP=3,002#, FG=.77, PUMP'D 753 BBLS SLK WTR W/ 9,618# 30/50 MESH W/ 4,886# RESIN COAT IN TAIL W/ 14,504# TOTAL PROP PUMP'D, ISIP=2,820#, FG=.75, AR=47.5, AP=5,753#, MR=49.6, MP=6,583#, NPI=-182#, 22/24 CALC PERFS OPEN. 90%

PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9,049', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,884'-9,019' [24 HOLES] AS PERSAY IN PROCEDURE.

FRAC STG #3] WHP=926#, BRK DN PERFS=3,229#, @=4.7 BPM, INJ RT=46.2, INJ PSI=6,177#, ISIP=2,892#, FG=.76, PUMP'D 932 BBLS SLK WTR W/ 13,791# 30/50 MESH W/ 4,725# RESIN COAT IN TAIL W/ 18,516# TOTAL PROP PUMP'D, ISIP=2,812#, FG=.75, AR=49.4, AP=6,072#, MR=52.4, MP=6,654#, NPI=-80#, 18/24 CALC PERFS OPEN. 76%

PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8'670', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. 8,485'-8,620' [24 HOLEWS] AS PERSAY IN PROCEDURE SWIFN.

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|                         | -25K4BS [YELLO\   | N]               | Spud Co         | onductor         | : 12/17/2   | 010      | Spud Date: 1/2    | 1   |
|-------------------------|-------------------|------------------|-----------------|------------------|-------------|----------|-------------------|---|
| Project: UTAH           |                   |                  | Site: NB        |                  |             |          |                   | Rig Name No: ROCKY MOUNTAIN WELL<br>SERVICE 3/3   |
| event: COMPL            |                   |                  | Start Da        | 7                |             |          |                   | End Date: 5/11/2011   |
| Active Datum:<br>.evel) | RKB @4,997.00ft ( | above Mean       | Sea             | UWI: N           | IE/SW/0/    | 9/S/21/E | E/25/0/0/26/PM/S/ | 1838/W/0/1400/0/0   |
| Date                    | Time<br>Start-End | Duration<br>(hr) | Phase           | Code             | Sub<br>Code | P/U      | MD From<br>(ft)   | Operation   |
| 5/3/2011                | 6:45 - 7:00       | 0.25             | COMP            | 48               |             | P        |                   | HSM,  |
|                         | 7:00 - 17:30      | 10.50            | COMP            | 36               | E           | P        |                   | FRAC STG #4 8,485'-8,620' [24 HOLES]  FRAC STG #4] WHP=1,700#, BRK DN  PERFS=3,492#, @=4.8 BPM, INJ RT=44, INJ  PSI=5,885#, ISIP=2,552#, FG=.74, PUMP'D 643  BBLS SLK WTR W/ 7,039# 30/50 MESH W/ 5,057#  RESIN COAT IN TAIL W/ 12,096# TOTAL PROP  PUMP'D, ISIP=2,417#, FG=.72, AR=45.6,  AP=5,867#, MR=48.2, MP=6,674#, NPI=-135#,  17/24 CALC PERFS OPEN. 69%. |
|                         |                   |                  |                 |                  |             |          |                   | PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP 6<br>PERF GUN, SET CBP @=8,390', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36<br>HOLE. 8,206'-8,340' [24 HOLES] AS PERSAY IN<br>PROCEDURE.  |
|                         |                   |                  |                 |                  |             |          |                   | FRAC STG #5] WHP=1,368#, BRK DN PERFS=3,700#, @=4.6 BPM, INJ RT=42, INJ PSI=5,144#, ISIP=2,730#, FG=.77, PUMP'D 593 BBLS SLK WTR W/ 6,325# 30/50 MESH W/ 4,826# RESIN COAT IN TAIL W/ 11,151# TOTAL PROP PUMP'D, ISIP=2,772#, FG=.77, AR=46.8, AP=5,523#, MR=48.8, MP=5,988#, NPI=42#, 20/24 CALC PERFS OPEN. 84%.  |
|                         |                   |                  |                 |                  |             |          |                   | PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP<br>PERF GUN, SET CBP @=8,154', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.3<br>HOLE. 7,924'-8,114' [24 HOLES] AS PERSAY IN<br>PROCEDURE.   |
|                         |                   |                  |                 |                  |             |          |                   | FRAC STG #6] WHP=1,203#, BRK DN PERFS=2,634#, @=4.6 BPM, INJ RT=49.5, INJ PSI=5,590#, ISIP=1,888#, FG=67, PUMP'D 710 BBLS SLK WTR W/ 9,256# 30/50 MESH W/ 4,976# RESIN COAT IN TAIL W/ 14,232# TOTAL PROP PUMP'D, ISIP=2,367#, FG=.73, AR=47.1, AP=5,927#, MR=49.9, MP=6,587#, NPI=479# 18/2 CALC PERFS OPEN. 74%   |
|                         |                   |                  |                 |                  |             |          |                   | PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP<br>PERF GUN, SET CBP @=7,829', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.3<br>HOLE. 7,646'-7,779' [24 HOLES] AS PERSAY IN<br>PROCEDURE.   |
|                         |                   |                  |                 | -                | VED         |          |                   | FRAC STG #7] WHP=1,185#, BRK DN<br>PERFS=3,790#, @=4.6 BPM, INJ RT=49.7, INJ  |
|                         |                   |                  | JU<br>DIV. OF ( | IN 16<br>DIL, GA |             | ING      |                   | PSI=5,506#, ISIP=1,705#, FG=66, PUMP'D 1,465<br>BBLS SLK WTR W/ 27,537# 30/50 MESH W/ 5,111<br>RESIN COAT IN TAIL W/ 32,648# TOTAL PROP<br>PUMP'D, ISIP=2,006#, FG=.70, AR=49.6,<br>AP=4,766#, MR=50.2, MP=6,178#, NPI=301#, 17/2<br>CALC PERFS OPEN. 72%   |
|                         | 6:30 - 6:45       | 0.25             | COMP            | 48               |             | P        |                   | PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP<br>PERF GUN, SET CBP @=7,632', PERF<br>MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.3<br>HOLE. 7,532'-7,602' [24 HOLES] AS PERSAY IN<br>PROCEDURE. SWIFN.<br>HSM, FRACING & RIGGING DOWN   |

6/7/2011 11:03:55AM 2

#### **US ROCKIES REGION Operation Summary Report** Spud Conductor: 12/17/2010 Spud Date: 1/27/2011 Well: NBU 921-25K4BS [YELLOW] Project: UTAH-UINTAH Site: NBU 921-25K PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3 **Event: COMPLETION** Start Date: 4/29/2011 End Date: 5/11/2011 UWI: NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/1400/0/0 Active Datum: RKB @4,997.00ft (above Mean Sea P/U MD From Date Time Duration Phase Code Sub Operation Start-End (hr) Code (ft) 6:45 - 6:45 0.00 COMP 36 P FRAC MESAVERDE STG #8 7,532'-7,602' [24 Ε HOLES] FRAC STG #8] WHP=1,120#, BRK DN PERFS=1,760#, @=4.3 BPM, INJ RT=48.8, INJ PSI=5,266#, ISIP=1,266#, FG=.61, PUMP'D 1,262 BBLS SLK WTR W/ 34,999# 30/50 MESH W/ 6,088# RESIN COAT IN TAIL W/ 41,087# TOTAL PROP PUMP'D, ISIP=2,293#, FG=.74, AR=45.8, AP=4,743#, MR=49.2, MP=5,619#, NPI=1,027#, 16/24 CALC PERFS OPEN. 67%. P/U RIH W/ HALIBURTON 8K CBP SET FOR TOP KILL @=7,482' 7,284 TOTAL WTR 158.718# TOTAL SAND 735 GALS SCALE INHIB. 173 GALS BIOCIDE 7:00 - 17:00 5/10/2011 10.00 COMP 30 Α 7AM [DAY 5] JSA-R/D RIG, R/U RIG, NDWH, NUBOP. P/U TBG. RAINY WEATHER. RIG DOWN FROM NBU 921-25L4AS. MOVE OVER AND R/U ON NBU 921-25K4BS. [3RD OF 4 WELL PAD] YELLOW WELL. SPOT EQUIPMENT. NDWH, NUBOP. R/U FLOOR & TBG EQUIPMENT. P/U 3-7/8" SEALED BRG BIT, POBS W/ XN NIPPLE, NEW 2-3/8" L-80 TBG AND RIH. [SLM & DRIFTED] TAG SAND AT 7452'. R/U SWVL & RIG PUMP. ESTABLISH CIRCULATION, P.T. SURFACE LINES & BOP TO 3000#, LOSS 0# IN 15 MIN. C/O 30' SAND TO CBP#1. [DRLG CBP#1] @ 7482'. D/O HALL 8K CBP IN 10 MIN. 100# INC. RIH & C/O 30' SAND TO CBP#2. FCP=100#. [DRLG CBP#2] @ 7632'. D/O HALL 8K CBP IN 4 MIN. 100# INC. RIH & C/O 30' SAND TO CBP#3. CIRCULATE WELL CLEAN. FCP=200#. PUH W/ EOT @ 7797'. 5 PM SWI-SDFN. PREP TO D/O 6 MORE PLUGS IN

AM AND LAND TBG.

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6/7/2011

11:03:55AM

# **Operation Summary Report**

| Well: NBU 92            | -25K4BS [YELLO    | W]            | Spud C   | onductor  | : 12/17/2   | 010      | Spud Date: 1/27/2011   |
|-------------------------|-------------------|---------------|----------|-----------|-------------|----------|--|
| Project: UTAH           | -UINTAH           |               | Site: NE | BU 921-2  | 5K PAD      |          | Rig Name No: ROCKY MOUNTAIN WELL<br>SERVICE 3/3  |
| Event: COMPI            | ETION             |               | Start Da | te: 4/29/ | 2011        |          | End Date: 5/11/2011  |
| Active Datum:<br>Level) | RKB @4,997.00ft   | (above Mean   | Sea      | UWI: N    | IE/SW/0/    | 9/S/21/E | /25/0/0/26/PM/S/1838/W/0/1400/0/0  |
| Date                    | Time<br>Start-End | Duration (hr) | Phase    | Code      | Sub<br>Code | P/U      | MD From Operation (ft)   |
| 5/11/2011               | 7:00 - 16:00      | 9.00          | COMP     | 30        | ,           | Р        | 7AM [DAY 6] JSA DRLG PLUGS, PSI, LAND TBG, NDBOP, NUWH. R/D RIG, R/U RIG.  |
|                         |                   |               |          |           |             |          | SITP=0#. SICP=900#. EOT @ 7797'. OPEN WELL<br>TO PIT & BLEED DOWN PSI TO 200# IN 5 MIN.<br>CONTINUE DRILLING PLUGS.  |
|                         |                   |               |          |           |             |          | [DRLG CBP#3] @ 7829'. D/O HALL 8K CBP IN 5<br>MIN. 0# INC. RIH & C/O 30' SAND TO CBP#4.<br>FCP=200#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#4] @ 8154'. D/O HALL 8K CBP IN 7<br>MIN. 100# INC. RIH & C/O 15' SAND TO CBP#5.<br>FCP=400#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#5] @ 8390'. D/O HALL 8K CBP IN 5<br>MIN. 300# INC. RIH & C/O 30' SAND TO CBP#6.<br>FCP=700#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#6] @ 8670'. D/O HALL 8K CBP IN 7<br>MIN. 150# INC. RIH & C/O 35' SAND TO CBP#7.<br>FCP=600#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#7] @ 9049'. D/O HALL 8K CBP IN 4<br>MIN. 200# INC. RIH & C/O 25' SAND TO CBP#8.<br>FCP=700#.   |
|                         |                   |               |          |           |             |          | [DRLG CBP#8] @ 9314'. D/O HALL 8K CBP IN 4 MIN. 300# INC. RIH, TAG SAND @ 9533'. C/O 78' SAND TO PBTD @ 9611'. B.P. @ 9533'. C/O 78' SAND TO PBTD @ 9611'. B.P. @ 9533'. CIRCULATE WELL CLEAN. R/D SWVL. POOH & L/D 18 JTS ON FLOAT. PIPE RAMS NOT SEALING GOOD. LAND TBG ON HANGER W/ 285 JTS NEW 2-3/8" L-80 TBG. EOT @ 9054.43', POBS W/ XN @ 9052.23'. R/D FLOOR & TBG EQUIPMENT. DROP BALL DN TBG. NDBOP, NUWH. PUMP OFF THE BIT @ 2200#. OPEN WELL TO FBT TO UNLOAD TBG VOLUME. 9 MIN TO UNLOAD. |
|                         |                   |               | F        | RECE      | EIVE        | D        | 1PM TURN WELL OVER TO DELSCO FBC & APC MAINT CREW. FTP=2000#, SICP=2000#, 20/64 CHOKE SELLING @ 1.7 MCF DAILY RATE. RIG PMP'D 250 BBLS. LTR=5784 BBLS.   |
|                         |                   |               | 1.       | JUN 1     | 6 20        | 1        | RACK EQUIPMENT. R/D RIG. MOVE OVER & R/U<br>ON NBU 921-25L2AS [GRN WELL] 4 OF 4 ON PAD.  |
|                         |                   |               | DIV.     | OF OIL,   | gas & N     | IINING   | NDWH, NUBOP. R/U FLOOR & TBG EQUIPMENT.<br>CHANGE OUT PIPE RAMS IN BOP.  |
|                         |                   |               |          |           |             |          | 4 PM SDFN. PREP TO P/U BIT & TBG IN AM.  |
|                         |                   |               |          |           |             |          | 315 JTS DELIVERED<br>285 LANDED<br>29 RETURNED<br>1 JUNK   |
|                         | 13:00 - 13:00     | 0.00          | PROD     | 50        |             |          | WELL TURNED TO SALES @ 1300 HRON 5/11/11 - 1797 MCFD, 1680 BWPD, CP 2000#, FTP 2000#, CK 20/64"  |
| 5/16/2011               | 7:00 -            |               |          | 50        |             |          | WELL IP'D ON 5/16/11 - 2426 MCFD, 0 BOPD, 480<br>BWPD, CP 3019#, FTP 1821#, CK 20/64", LP 166#,<br>24 HRS  |

6/7/2011 11:03:55AM

# JUN 16 2011

# 1 General

# DIV. OF OIL, GAS & MINING

#### 1.1 Customer Information

| Company        | US ROCKIES REGION |
|----------------|-------------------|
| Representative |                   |
| Address        |                   |

# 1.2 Well Information

| Well                        | NBU 921-25K4BS [YELLOW]                | Wellbore No.      | ОН  |
|-----------------------------|--|-------------------|---|
| Well Name                   | NBU 921-25K4BS                         | Common Name       | NBU 921-25K4BS  |
| Project                     | UTAH-UINTAH                            | Site              | NBU 921-25K PAD                                       |
| Vertical Section<br>Azimuth | 89.00 (                                | ) North Reference | True  |
| Origin N/S                  |  | Origin E/W        |   |
| Spud Date                   | 1/27/2011                              | UWI               | NE/SW/0/9/S/21/E/25/0/0/26/PM/S/1838/W/0/14<br>00/0/0 |
| Active Datum                | RKB @4,997.00ft (above Mean Sea Level) | •                 |   |

# 2 Survey Name

# 2.1 Survey Name: Survey #1

| Survey Name | Survey #1 | Company  | WEATHERFORD |
|-------------|-----------|----------|-------------|
| Started     | 1/27/2011 | Ended    |             |
| Tool Name   | MWD       | Engineer | Anadarko    |

# 2.1.1 Tie On Point

| MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD (ft) |      | N    |
|------------|------------|------------|----------|------|------|
| 17.00      | 0.00       | 0.00       | 17.00    | 0.00 | 0.00 |

# 2.1.2 Survey Stations

| Date   | Туре   | MD       | Inc   | Azi   | TVD      | N/S   | E/W    | V. Sec | DLeg      | Build     | Turn      | TFace   |
|--|--------|----------|-------|-------|----------|-------|--------|--------|-----------|-----------|-----------|---------|
|  |        | (ft)     | (°)   | (°)   | (ft)     | (ft)  | (ft)   | (ft)   | (°/100ft) | (°/100ft) | (°/100ft) | (°)     |
| 1/27/2011  | Tie On | 17.00    | 0.00  | 0.00  | 17.00    | 0.00  | 0.00   | 0.00   | 0.00      | 0.00      | 0.00      | 0.00    |
| 1/27/2011  | NORMAL | 221.00   | 1.02  | 79.93 | 220.99   | 0.32  | 1.79   | 1.79   | 0.50      | 0.50      | 0.00      | 79.93   |
|  | NORMAL | 314.00   | 3.08  | 84.97 | 313.92   | 0.68  | 5.09   | 5.10   | 2.22      | 2.22      | 5.42      | 7.52    |
| 1/28/2011  | NORMAL | 408.00   | 5.55  | 77.80 | 407.65   | 1.86  | 12.05  | 12.08  | 2.68      | 2.63      | -7.63     | -15.91  |
| The same of the sa | NORMAL | 503.00   | 7.63  | 75.43 | 502.02   | 4.42  | 22.65  | 22.72  | 2.21      | 2.19      | -2.49     | -8.63   |
|  | NORMAL | 598.00   | 9.18  | 81.94 | 596.00   | 7.07  | 36.26  | 36.37  | 1.91      | 1.63      | 6.85      | 34.79   |
|  | NORMAL | 694.00   | 10.40 | 90.00 | 690.60   | 8.14  | 52.50  | 52.64  | 1.91      | 1.27      | 8.40      | 52.34   |
| 200000000000000000000000000000000000000  | NORMAL | 789.00   | 10.75 | 90.41 | 783.99   | 8.08  | 69.94  | 70.07  | 0.38      | 0.37      | 0.43      | 12.33   |
|  | NORMAL | 884.00   | 11.13 | 91.54 | 877.26   | 7.77  | 87.96  | 88.09  | 0.46      | 0.40      | 1.19      | 29.99   |
|  | NORMAL | 979.00   | 11.88 | 85.04 | 970.36   | 8.37  | 106.87 | 107.00 | 1.58      | 0.79      | -6.84     | -63.16  |
|  | NORMAL | 1,073.00 | 12.19 | 83.66 | 1,062.29 | 10.30 | 126.38 | 126.54 | 0.45      | 0.33      | -1.47     | -43.54  |
|  | NORMAL | 1,168.00 | 12.13 | 82.66 | 1,155.16 | 12.69 | 146.24 | 146.44 | 0.23      | -0.06     | -1.05     | -106.39 |
| 1000 THE RESERVE OF T | NORMAL | 1,263.00 | 13.34 | 82.63 | 1,247.82 | 15.37 | 167.01 | 167.26 | 1.27      | 1.27      | -0.03     | -0.33   |
|  | NORMAL | 1,359.00 | 14.29 | 84.91 | 1,341.04 | 17.84 | 189.80 | 190.08 | 1.14      | 0.99      | 2.38      | 30.93   |
|  | NORMAL | 1,454.00 | 14.44 | 84.41 | 1,433.07 | 20.03 | 213.26 | 213.58 | 0.20      | 0.16      | -0.53     | -39.83  |
|  | NORMAL | 1,548.00 | 15.50 | 86.66 | 1,523.88 | 21.91 | 237.47 | 237.82 | 1.29      | 1.13      | 2.39      | 29.83   |
|  | NORMAL | 1,642.00 | 16.00 | 87.79 | 1,614.35 | 23.14 | 262.95 | 263.32 | 0.62      | 0.53      | 1.20      | 32.07   |
|  | NORMAL | 1,738.00 | 16.50 | 87.16 | 1,706.52 | 24.32 | 289.79 | 290.17 | 0.55      | 0.52      | -0.66     | -19.72  |
|  | NORMAL | 1,833.00 | 16.75 | 86.41 | 1,797.55 | 25.85 | 316.93 | 317.33 | 0.35      | 0.26      | -0.79     | -41.00  |
| The Probability of the Control | NORMAL | 1,927.00 | 17.31 | 86.79 | 1,887.42 | 27.48 | 344.41 | 344.84 | 0.61      | 0.60      | 0.40      | 11.42   |
| the state of the sale for a second   | NORMAL | 2,023.00 | 18.00 | 86.29 | 1,978.90 | 29.24 | 373.47 | 373.92 | 0.74      | 0.72      | -0.52     | -12.63  |

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# JUN 16 2011

DIV. OF OIL, GAS & MINING

**US ROCKIES REGION** 

DIM OF UIL, CAS & MINING

# 2.1.2 Survey Stations (Continued)

| Date   | Type   | MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|--|--------|------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--------------------|-------------------|--------------|
| 1/28/2011  | NORMAL | 2,118.00   | 17.69      | 85.16      | 2,069.33    | 31.41       | 402.50      | 402.99         | 0.49              | -0.33              | -1.19             | -132.37      |
|  | NORMAL | 2,213.00   | 17.94      | 86.04      | 2,159.78    | 33.64       | 431.48      | 432.00         | 0.39              | 0.26               | 0.93              | 47.54        |
|  | NORMAL | 2,308.00   | 17.56      | 85.16      | 2,250.25    | 35.85       | 460.35      | 460.91         | 0.49              | -0.40              | -0.93             | -145.20      |
| 1/29/2011  | NORMAL | 2,402.00   | 17.69      | 87.91      | 2,339.84    | 37.57       | 488.76      | 489.34         | 0.90              | 0.14               | 2.93              | 82.44        |
|  | NORMAL | 2,497.00   | 18.06      | 88.04      | 2,430.26    | 38.60       | 517.90      | 518.49         | 0.39              | 0.39               | 0.14              | 6.22         |
| Market of all the Control to the Control of the Con | NORMAL | 2,612.00   | 16.15      | 82.15      | 2,540.17    | 41.40       | 551.56      | 552.20         | 2.24              | -1.66              | -5.12             | -140.58      |

# 2.2 Survey Name: Survey #2

| Survey Name | Survey #2 | Company  | WEATHERFORD |
|-------------|-----------|----------|-------------|
| Started     | 3/1/2011  | Ended    |             |
| Tool Name   | MWD       | Engineer | Anadarko    |

# 2.2.1 Tie On Point

| MD       | Inc   | Azi   | TVD      | N/S   | E/W  |
|----------|-------|-------|----------|-------|------|
| (ft)     | (°)   | (°)   | (ft)     | (ft)  | (ft) |
| 2,612.00 | 16.15 | 82.15 | 2,540.17 | 41.40 |      |

# 2.2.2 Survey Stations

| Date   | Туре   | MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|--|--------|------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--------------------|-------------------|--------------|
| 3/1/2011   | Tie On | 2,612.00   | 16.15      | 82.15      | 2,540.17    | 41.40       | 551.56      | 552.20         | 0.00              | 0.00               | 0.00              | 0.00         |
| 3/1/2011   | NORMAL | 2,752.00   | 14.57      | 75.38      | 2,675.18    | 48.50       | 587.90      | 588.65         | 1.71              | -1.13              | -4.84             | -134.61      |
| THE PERSON NAMED IN COMPANIES  | NORMAL | 2,846.00   | 12.63      | 78.03      | 2,766.54    | 53.62       | 609.39      | 610.23         | 2.17              | -2.06              | 2.82              | 163.48       |
|  | NORMAL | 2,941.00   | 11.56      | 84.90      | 2,859.44    | 56.62       | 629.03      | 629.93         | 1.89              | -1.13              | 7.23              | 129.95       |
|  | NORMAL | 3,035.00   | 10.13      | 83.53      | 2,951.75    | 58.39       | 646.63      | 647.55         | 1.55              | -1.52              | -1.46             | -170.45      |
|  | NORMAL | 3,130.00   | 9.56       | 81.78      | 3,045.36    | 60.46       | 662.74      | 663.69         | 0.68              | -0.60              | -1.84             | -153.16      |
|  | NORMAL | 3,225.00   | 8.81       | 88.15      | 3,139.14    | 61.82       | 677.82      | 678.79         | 1.33              | -0.79              | 6.71              | 129.53       |
|  | NORMAL | 3,320.00   | 8.44       | 88.65      | 3,233.06    | 62.22       | 692.06      | 693.04         | 0.40              | -0.39              | 0.53              | 168.79       |
|  | NORMAL | 3,414.00   | 6.50       | 90.03      | 3,326.26    | 62.38       | 704.28      | 705.26         | 2.07              | -2.06              | 1.47              | 175.40       |
|  | NORMAL | 3,509.00   | 5.75       | 91.28      | 3,420.72    | 62.27       | 714.41      | 715.39         | 0.80              | -0.79              | 1.32              | 170.54       |
|  | NORMAL | 3,603.00   | 4.00       | 90.15      | 3,514.38    | 62.16       | 722.40      | 723.38         | 1.86              | -1.86              | -1.20             | -177.42      |
| ha 1   | NORMAL | 3,698.00   | 3.63       | 91.78      | 3,609.17    | 62.05       | 728.72      | 729.69         | 0.41              | -0.39              | 1.72              | 164.48       |
| collection on Management and the   | NORMAL | 3,793.00   | 2.38       | 84.28      | 3,704.03    | 62.16       | 733.69      | 734.66         | 1.38              | -1.32              | -7.89             | -166.26      |
|  | NORMAL | 3,887.00   | 2.00       | 84.53      | 3,797.96    | 62.51       | 737.26      | 738.24         | 0.40              | -0.40              | 0.27              | 178.68       |
|  | NORMAL | 3,982.00   | 1.63       | 88.29      | 3,892.92    | 62.71       | 740.26      | 741.25         | 0.41              | -0.39              | 3.96              | 164.03       |
|  | NORMAL | 4,077.00   | 1.13       | 115.65     | 3,987.89    | 62.34       | 742.46      | 743.43         | 0.86              | -0.53              | 28.80             | 140.34       |
|  | NORMAL | 4,172.00   | 1.13       | 130.53     | 4,082.87    | 61.33       | 744.02      | 744.97         | 0.31              | 0.00               | 15.66             | 97.44        |
|  | NORMAL | 4,267.00   | 1.13       | 137.40     | 4,177.85    | 60.03       | 745.36      | 746.30         | 0.14              | 0.00               | 7.23              | 93.43        |
|  | NORMAL | 4,362.00   | 0.38       | 192.53     | 4,272.84    | 59.03       | 745.93      | 746.84         | 1.02              | -0.79              | 58.03             | 161.14       |
|  | NORMAL | 4,456.00   | 0.81       | 183.90     | 4,366.84    | 58.06       | 745.81      | 746.71         | 0.47              | 0.46               | -9.18             | -16.11       |
|  | NORMAL | 4,551.00   | 0.13       | 184.28     | 4,461.84    | 57.29       | 745.76      | 746.65         | 0.72              | -0.72              | 0.40              | 179.93       |
| and the same and t | NORMAL | 4,646.00   | 0.81       | 189.53     | 4,556.83    | 56.52       | 745.64      | 746.51         | 0.72              | 0.72               | 5.53              | 6.25         |
|  | NORMAL | 4,741.00   | 0.19       | 159.28     | 4,651.83    | 55.71       | 745.59      | 746.44         | 0.69              | -0.65              | -31.84            | -171.57      |
| and the territory of the second territory of the   | NORMAL | 4,835.00   | 0.25       | 153.78     | 4,745.83    | 55.38       | 745.73      | 746.58         | 0.07              | 0.06               | -5.85             | -22.15       |
|  | NORMAL | 4,930.00   | 0.63       | 170.53     | 4,840.82    | 54.68       | 745.91      | 746.75         | 0.42              | 0.40               | 17.63             | 27.20        |
|  | NORMAL | 5,025.00   | 0.69       | 161.78     | 4,935.82    | 53.62       | 746.17      | 747.00         | 0.12              | 0.06               | -9.21             | -63.66       |
| 3/2/2011   | NORMAL | 5,120.00   | 0.75       | 169.28     | 5,030.81    | 52.46       | 746.47      | 747.27         | 0.12              | 0.06               | 7.89              | 61.30        |
|  | NORMAL | 5,215.00   | 0.75       | 175.28     | 5,125.80    | 51.23       | 746.64      | 747.42         | 0.08              | 0.00               | 6.32              | 93.00        |
|  | NORMAL | 5,309.00   | 0.94       | 187.15     | 5,219.79    | 49.85       | 746.59      | 747.35         | 0.27              | 0.20               | 12.63             | 48.69        |
|  | NORMAL | 5,404.00   | 1.06       | 184.78     | 5,314.78    | 48.21       | 746.42      | 747.15         | 0.13              | 0.13               | -2.49             | -20.21       |
|  | NORMAL | 5,499.00   | 0.63       | 145.65     | 5,409.77    | 46.90       | 746.64      | 747.35         | 0.73              | -0.45              | -41.19            | -145.16      |
|  | NORMAL | 5,594.00   | 0.88       | 142.78     | 5,504.76    | 45.89       | 747.38      | 748.06         | 0.27              | 0.26               | -3.02             | -10.04       |
|  | NORMAL | 5,688.00   | 0.69       | 146.78     | 5,598.75    | 44.84       | 748.12      | 748.79         | 0.21              | -0.20              | 4.26              | 165.90       |

# 2.2.2 Survey Stations (Continued)

| Date     | Type   | MD<br>(ft) | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|----------|--------|------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--------------------|-------------------|--------------|
| 3/2/2011 | NORMAL | 5,783.00   | 1.00       | 185.65     | 5,693.74    | 43.53       | 748.36      | 749.00         | 0.67              | 0.33               | 40.92             | 81.96        |
|          | NORMAL | 5,878.00   | 1.06       | 183.53     | 5,788.73    | 41.83       | 748.22      | 748.84         | 0.07              | 0.06               | -2.23             | -33.48       |
|          | NORMAL | 5,973.00   | 1.13       | 188.15     | 5,883.71    | 40.03       | 748.03      | 748.62         | 0.12              | 0.07               | 4.86              | 53.92        |
|          | NORMAL | 6,067.00   | 1.19       | 184.28     | 5,977.69    | 38.14       | 747.83      | 748.38         | 0.10              | 0.06               | -4.12             | -54.50       |
|          | NORMAL | 6,162.00   | 0.50       | 145.03     | 6,072.68    | 36.81       | 747.99      | 748.52         | 0.91              | -0.73              | -41.32            | -158.49      |
|          | NORMAL | 6,257.00   | 1.00       | 129.90     | 6,167.67    | 35.94       | 748.87      | 749.38         | 0.56              | 0.53               | -15.93            | -29.29       |
|          | NORMAL | 6,352.00   | 1.06       | 138.78     | 6,262.66    | 34.75       | 750.08      | 750.57         | 0.18              | 0.06               | 9.35              | 73.88        |
|          | NORMAL | 6,447.00   | 1.25       | 146.65     | 6,357.64    | 33.22       | 751.23      | 751.70         | 0.26              | 0.20               | 8.28              | 43.84        |
|          | NORMAL | 6,541.00   | 0.44       | 153.28     | 6,451.62    | 32.04       | 751.96      | 752.40         | 0.87              | -0.86              | 7.05              | 176.42       |
| 3/3/2011 | NORMAL | 6,731.00   | 0.69       | 171.03     | 6,641.62    | 30.26       | 752.46      | 752.88         | 0.16              | 0.13               | 9.34              | 44.09        |
|          | NORMAL | 6,826.00   | 1.06       | 175.15     | 6,736.60    | 28.82       | 752.63      | 753.01         | 0.39              | 0.39               | 4.34              | 11.71        |
|          | NORMAL | 6,920.00   | 1.33       | 177.67     | 6,830.58    | 26.87       | 752.74      | 753.10         | 0.29              | 0.29               | 2.68              | 12.28        |
|          | NORMAL | 7,015.00   | 0.38       | 203.98     | 6,925.57    | 25.48       | 752.66      | 752.99         | 1.06              | -1.00              | 27.69             | 170.34       |
|          | NORMAL | 7,110.00   | 0.13       | 241.90     | 7,020.57    | 25.14       | 752.44      | 752.76         | 0.30              | -0.26              | 39.92             | 163.94       |
|          | NORMAL | 7,205.00   | 1.06       | 55.40      | 7,115.57    | 25.59       | 753.07      | 753.40         | 1.25              | 0.98               | 182.63            | 174.21       |
|          | NORMAL | 7,300.00   | 1.19       | 74.65      | 7,210.55    | 26.35       | 754.74      | 755.09         | 0.42              | 0.14               | 20.26             | 80.81        |
| 3/4/2011 | NORMAL | 7,489.00   | 0.31       | 91.90      | 7,399.53    | 26.85       | 757.14      | 757.50         | 0.48              | -0.47              | 9.13              | 174.13       |
|          | NORMAL | 7,584.00   | 0.25       | 135.90     | 7,494.53    | 26.69       | 757.55      | 757.90         | 0.23              | -0.06              | 46.32             | 126.85       |
|          | NORMAL | 7,679.00   | 0.88       | 155.65     | 7,589.52    | 25.88       | 757.99      | 758.33         | 0.68              | 0.66               | 20.79             | 27.21        |
|          | NORMAL | 7,774.00   | 1.13       | 151.53     | 7,684.51    | 24.39       | 758.74      | 759.05         | 0.27              | 0.26               | -4.34             | -18.19       |
| 3/5/2011 | NORMAL | 7,869.00   | 1.25       | 144.90     | 7,779.49    | 22.72       | 759.78      | 760.06         | 0.19              | 0.13               | -6.98             | -52.27       |
|          | NORMAL | 7,963.00   | 0.63       | 238.90     | 7,873.48    | 21.61       | 759.93      | 760.19         | 1.53              | -0.66              | 100.00            | 154.09       |
|          | NORMAL | 8,058.00   | 0.69       | 186.65     | 7,968.48    | 20.77       | 759.41      | 759.66         | 0.61              | 0.06               | -55.00            | -110.83      |
|          | NORMAL | 8,153.00   | 0.69       | 183.15     | 8,063.47    | 19.64       | 759.32      | 759.54         | 0.04              | 0.00               | -3.68             | -91.75       |
|          | NORMAL | 8,248.00   | 0.94       | 178.78     | 8,158.46    | 18.29       | 759.30      | 759.50         | 0.27              | 0.26               | -4.60             | -16.15       |
|          | NORMAL | 8,343.00   | 1.31       | 166.15     | 8,253.44    | 16.45       | 759.58      | 759.75         | 0.47              | 0.39               | -13.29            | -40.25       |
| ·        | NORMAL | 8,438.00   | 1.31       | 155.78     | 8,348.42    | 14.41       | 760.28      | 760.42         | 0.25              | 0.00               | -10.92            | -95.18       |
|          | NORMAL | 8,533.00   | 1.69       | 156.53     | 8,443.38    | 12.13       | 761.29      | 761.38         | 0.40              | 0.40               | 0.79              | 3.33         |
|          | NORMAL | 8,627.00   | 1.63       | 156.15     | 8,537.34    | 9.64        | 762.38      | 762.43         | 0.06              | -0.06              | -0.40             | -169.79      |
|          | NORMAL | 8,722.00   | 1.75       | 165.03     | 8,632.30    | 7.00        | 763.30      | 763.31         | 0.30              | 0.13               | 9.35              | 69.86        |
| 3/6/2011 | NORMAL | 9,660.00   | 1.75       | 165.03     | 9,569.86    | -20.67      | 770.70      | 770.22         | 0.00              | 0.00               | 0.00              | 0.00         |
| 3/7/2011 | NORMAL | 9,660.00   | 1.75       | 165.03     | 9,569.86    | -20.67      | 770.70      | 770.22         | 0.00              | 0.00               | 0.00              | 0.00         |

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